The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 88, No. 11 · CHICAGO, ILLINOIS · MARCH 12, 1927

THE DUTY OF THE HOSPITAL STAFF TO THE INTERN*

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The program of standardization of hospitals by the American College of Surgeons, together with the rapid strides of medical knowledge and the demand by progressive medical men for more efficient hospital service, has made popular over the entire country the idea of establishing the intern and resident staff. The advantages to the hospital and particularly to the staff have caused a widespread demand by hospitals for recognition by the American Medical Association as a proper place for graduates to obtain intern training. In many instances, there is little realization of the responsibility to the intern in making this request for recognition. The hospitals of the country have been fairly thoroughly surveyed and registered by various public and official organizations, and the registration of the hospital by the state health department or certification of standardization by the American College of Surgeons, or approval by other bodies with various aims and points of view in mind has seemed in many instances to be a sufficient warrant for the hospital to ask recommendation by the American Medical Association. Too often there has not been a sufficient realization of what should be expected of the hospital and particularly of the staff to obtain such approval. The various advantages to the hospital and to the staff have been very strongly brought to their favorable attention, but too often their obligation to the intern in return for his work has been little appreciated. A clear setting forth of those things which the graduate may rightfully expect in return for his work may clarify the situation and may furnish an indication to some hospitals where recognition has been denied or postponed as to what must be done in their institutions to make them acceptable.

PERSONAL CLINICAL INSTRUCTIONS

The matter must be looked on from the standpoint of the graduate. He has spent four years in intensive study of medicine and surgery in books, laboratory and clinic, where the theoretical side of medicine and a large part of the practical side have been demonstrated to him until he is familiar with it. He has, however, been mostly a spectator rather than a doer; he has not had responsibility on his shoulders to impress on him the seriousness of his work, and he has listened to the opinions of others without the necessity or perhaps the opportunity of making decisions for himself on which he can stand and which he is willing to defend. He has been taught diagnosis and treatment but more by precept and example than by participation. He has had the opportunity of seeing the work of others but has not had work of his own to do. He wishes to do this work for himself and to have it criticized, corrected or approved after he has solved the problem. He does not now want to be led by the hand to a conclusion, but desires to make his conclusion by himself and have it approved or disapproved after it has been done. He wants real practice, and real practice cannot be obtained without some measure of responsibility to be assumed. He is willing to do tiresome detail work on his cases, such as history taking, examinations and laboratory work; but having done this preliminary work he then does not expect to be dropped out of the picture without the opportunity of practice with the patient in the measures that follow, while the attending physician or surgeon reaps the reward of his preliminary work. He is eager to learn, to try his ideas and to check the results, and in order to do this he desires and should have a close contact with the patient from the beginning to the end, whether that end is a discharge from the hospital as a cured patient, or is the autopsy table which reveals the accuracy of the work that has been previously done.

The intern should be a daily visitor with the attending physician on all the patients in his department, and the orders of the attendant should be made through him, with such discussion as will explain to him why such orders are made. Constant bedside instruction would then be given, and the attendant himself would many times find that the comments and suggestions of his intern are of great value to him. He should have the opportunity of making careful and complete physical examinations on all the patients whom he visits. The privilege of complete physical examinations and of diagnosis should not be restricted to ward or charity cases, but private room cases should be included as well. Objection has been made by some physicians that their private patients would not submit to such examination and to such attention by an intern; but the cases in which this procedure is resented by private room patients are few and far between. The private room patients as well as the ward patients appreciate attention and thorough work, and in many years of experience I have found very few private patients who make objections to the services of an intern. It is usually the visitant who objects and not the patient.

The graduate has been educated in all the departments of medicine; the hospital that undertakes to complete his education by practical work must therefore

* Read before the Annual Congress on Medical Education, Medical Licensure and Hospitals, Chicago, Feb. 15, 1927.

be one with a well rounded service, so that he can have practical instruction in all those major branches with which he will come in contact in his active professional life. Provision must be made for practical work in internal medicine, in general surgery, in accident work, in obstetrics and in anesthesia. These are fundamental, and without any one of them his education is lopsided. Other branches, such as orthopedics, neurology, eye, ear, nose and throat, pediatrics, gynecology, urology and physiotherapy, are desirable, but the former are essential. The men working in these fields should not only know their subjects thoroughly but also be willing and able to impart their knowledge and experience to the intern as the cases coming under their charge present themselves as object lessons. Bedside instruction in differential diagnosis in the particular case, and consultation with the intern as to the best method of treatment and what is expected from each item of treatment, should be a part of the daily rounds. It is presumed that the attendant will take his own history and make his own diagnosis independently of or in addition to that obtained and made by the intern, and then a review of the intern's history, examination and diagnosis, with the pointing out of the failures of the intern, the stressing of the important points developed and a discussion of the signs and symptoms that make the diagnosis with the reasons therefor is the kind of instruction that the intern appreciates. Such instruction commends him for a good diagnosis well made, and shows him where he has been at fault when he has failed. All the interns coming from good medical colleges can and do when they first come to a hospital make good physical examinations and histories; but unless the visitant shows some interest in those written histories and examinations, commenting on them and criticizing them, the intern eventually feels that his efforts in this regard are not appreciated and are not used, and will slight this most important work. Laboratory work should be encouraged in all cases in which it may be of any assistance, and the laboratory observations should be discussed together with the other data in the case, and their proper evaluation from the experience of the attendant should be emphasized. In short, the visitant and his intern should be colaborers on each case, and the visitant who will trouble himself to be such a teacher and guide will never lack for popularity among the house staff, and will never be without an intern to go with him on his rounds.

Quite a considerable proportion of a new physician's work will be the care of minor accidents. He should be able to take care of such accident work *secundum artem*. Whether he handles his hands, his tools and himself well in the emergency such as an accident presents will determine whether he makes a good or a poor impression on the persons among whom he will practice, and may go far toward helping or marring his immediate future. He therefore should be taught in detail and by personal example the proper care of accident work, and should himself be permitted, after instruction, to care for accident cases, his opportunities being gradually enlarged as he shows ability. He should himself reduce fractures under the eye of the visitant, and he should be required to keep the various dressings and appliances used in an accident service in proper position during their use, and explanation should be given to him of the results of failure so to do. Few services in a hospital require such detailed careful observation and treatment as does the accident service, nor is any service ordinarily so much neglected; but it is a service which, if well cared for by the young physician, will probably do more to advance his interests when he starts his practice than any other service in the hospital. He therefore should be well taught.

In entering on his obstetric service, the intern should be taught obstetrics and should not be expected simply to administer anesthetics to the patient while the visitant attends to the delivery. Practical experience in examinations, in the determination of position and in normal delivery is rightfully his. It should be his privilege to be assistant in abnormal deliveries.

In surgery, which comprises a large proportion of the work in most hospitals, the greatest difficulty arises. In a hospital in which an intern staff has not been established, it is customary for the surgeon either to have his own assistant on all operations or to ask the referring physician to act as his assistant. Continuation of this procedure after establishing an intern staff too often relegates the intern to a position about equal to that of a nurse. Or perhaps he witnesses the operation in the capacity of anesthetist, a practice hardly to be commended from any standpoint. Often he does not have even the opportunity to see the operation as well as a spectator. A position such as this is not sufficient. The intern should so far as possible and so far as practical be first assistant to the operator. In this position he can see and he can learn. He will have an opportunity to develop manual dexterity, which is requisite in a surgeon; he will learn to meet the emergencies which arise, and will be able to do some of the minor work in connection with the operation. As he develops dexterity and knowledge, he should be permitted to do some minor operating by himself and without the assistance but under the eye of the attending surgeon. Before he has completed his term of service of one year in the hospital, he should have done many minor and a few major operations, such as herniotomy, appendectomy, excision of external tumors and amputations. He should not, of course, be turned loose on a patient without an experienced surgeon at hand in the operating room to direct him and to finish the work if the condition of the patient or the nature of the operation should require it; but he should be permitted, if able, to do the work, and should feel that the responsibility of that work is on his shoulders. Having operated on the patient, he should then have the responsibility of the after-care with as little interference from the attending surgeon as possible. Managing the responsibility of a patient is quite as much the duty of the staff to teach as is the actual medical and surgical treatment of the case.

RESIDENTS

It is highly advisable, if not absolutely necessary, for the hospital to have residents as well as interns. Certainly, if the hospital is of sufficient size to furnish satisfactory clinical material for the education of the intern, it is large enough to need one or more residents. The relationship of the resident to the visitant is the same as that of the intern, except that it is more intimate and more confidential. He should be chosen by the staff, if possible from the outgoing class of interns. His familiarity with the hospital and with the men on the staff, provided he has ability, will make his work much more acceptable than if he is a stranger to the institution. Furthermore, the practice of selecting the residents from the interns is an added incentive to good men to apply for the position of intern. A fair indica-

tion of the success of an institution as a training school is found in the proportion of interns of the hospital who apply for residency in their own institutions. If the staff has been faithful in meeting its obligations, the intern will appreciate it and will desire to stay where he can obtain further training of the same kind. On the other hand, if the staff does not meet its obligations and the intern's expectation of such obligation, he will be dissatisfied and will apply for residency elsewhere.

The resident must have more trust reposed in him, have more opportunities for practical work, and be more nearly the associate of the visitant than is the intern. He must not be asked to do the detailed drudgery that is expected of the intern, but it should be his duty to see that those duties are satisfactorily performed. He should be the superior officer of the intern, and should be so recognized by the staff of the hospital. He should make the rounds of the hospital with the attending physician and surgeon on whose service he is, together with the interns, and in addition he should make his own rounds with the interns at another hour of the day to supplement the work and the directions of the attending physician. He should be responsible for all of the cases in his service, and the visitant should support him in that responsibility to the patient, so that his contact will be only less intimate than that of the visitant himself. He should be given every facility possible to improve himself in practical work, for it must be remembered that in the case of the resident he has given one year to internship and is now giving one or perhaps two more years of the best part of his life to the service of the hospital, and for this he has a right to expect the best that the hospital and the staff can give him.

If a hospital is of sufficient size and has a proper staff with a proper spirit, it is not necessary in order to obtain interns and residents to offer them more than a nominal honorarium. Such an amount of money as will make the salary feature a deciding one for their coming to that hospital should not be offered either to interns or to residents. They should come and will come for the teaching and the opportunity alone, if the teaching and the opportunity are there. If they are not there, the young man is better off by far in some other hospital; and if they are not there, such a hospital should not be approved by the American Medical Association as a place for intern training. Training and experience for their own sakes should be the features that draw interns and residents to any hospital.

In addition to the strictly medical and surgical teaching which the intern obtains from the individual visitant, he should obtain other instructions, advice and suggestions that will be helpful to him in his work later on. In the medical school he is taught little of ethics and little of the medicolegal side of his profession. What he is taught is in the way of lectures and supposititious cases, but in the hospital the concrete case is before him, and it can well be used as an example to impress on him the ethical, social and legal phases that he will have to meet. The opportunity is present in many cases of guiding the young man in the medicolegal circumstances that arise. Many cases of accident are court cases, and the intern or the resident must appear in court as a witness. In such cases he should be instructed before going to court as to the rights and privileges both of himself and of his patients. He can be taught how to answer questions and what to avoid in answering questions, so that he can give his testimony creditably to himself and to the profession.

While the cases visited in the rounds are discussed freely among themselves in all their features, these young physicians should be thoroughly impressed with the sacredness of the privileged communication and the necessity of avoiding gossip about their cases. They should be taught to respect the privacy of the ills and affairs of the patients and their families that are told to them freely and entrusted to their discretion. Hospital cases also offer many opportunities for teaching these young physicians the ethical duties that they owe to their brother practitioners as well as to their patients and to the public. The intern should be taught to be charitable in his judgment of other physicians, and by the example of his instructor learn that other hospitals have men as good as his own, and that there are many physicians not connected with hospitals who also are good practitioners. He should be taught to be slow in judging adversely, even to himself, the diagnosis or treatment of the case before it came under his observation, and should learn never to express to the patient or the family, under any circumstances, dissatisfaction with or criticism of a previous attendant. Instruction is made more interesting to the intern by relation of similar cases out of the past experience of the attendant, and by information of historical interest, so that his knowledge of medicine and his sympathy with his profession is broadened, enlightened and made alive. The contact of the staff visitant with the intern as an educator and character builder is far more intimate than that of the professional educator. It is like the old peripatetic school of the Greeks, and the visitant who fails to make use of that opportunity is ignoring one of his greatest opportunities for justifying his existence in the medical profession. There is a wonderful opportunity for the physician on the staff of the hospital to impress his personality on these young men, and to teach them by precept and example not only the scientific side of the profession but the human and the social side as well. Such teaching probably will be appreciated more in later years than it is when given, but that man whose ideals are the highest, whose conduct is the cleanest and whose sympathies are the greatest will be loved, respected and idealized in a way to make him proud of the influence his life has had in keeping high the standard of our profession.

OBLIGATIONS OF THE STAFF

Besides the responsibility of the individual staff member to the intern, the staff as a whole has obligations to its staff of interns. The staff of a hospital should not be a number of individuals each one going his own way, doing his own work in the hospital without attention to the work of others. There should be that spirit of mutual trust, helpfulness and interest which promotes the discussion of each one's cases with the others as they meet in the hospital, and to these discussions the interns that are at hand should be welcome. The discussion of cases by the members of the staff in this way amounts to a consultation on the particular case and a general review of cases of that type which is of inestimable benefit to the intern. He should be encouraged to make inquiries and offer suggestions along with his elders, and a spirit and practice such as this promotes a general medical permeation of the atmosphere out of which the staff men as well as the

intern cannot fail to absorb much valuable medical knowledge.

There should also be frequent consultations between the medical, surgical and other staffs on interesting cases. Every visitant on the staff should be willing to consult with another staff member on his case, whether a fee for such consultation is in view or not, and such consultations should be frequent. To these formal consultations on difficult or interesting cases all available members of the intern staff should be carefully invited. The patient ordinarily is flattered by such interested attention and much good is done, not only to the patient himself but to the prestige of the attendant and of the hospital. Such practices can be utilized by the staff to promote better team and individual work, and will give the hospital a reputation for careful and thorough practice.

The establishment of a weekly clinicopathologic conference is one of the most appreciated means of teaching the intern. These conferences should be held at a time of the day most convenient for all concerned, particularly with reference to the interns' duties. An endeavor should be made to select a time at which all the interns can attend, and as many of the staff as can make it possible should be present also. The material for these conferences should be selected by the resident physicians or, in their absence, by that member of the staff in charge of the interns. Cases are selected that either are in the hospital at the time or have recently been there, and which present features of unusual interest. The case should be presented by the intern in whose care it has been, the essential points of the examination given, the laboratory and roentgen-ray observations detailed, and the progress noted. In the case of death, the autopsy data should be presented by the pathologist who made the autopsy. Discussion on the case should be free, friendly and critical, and should not be monopolized by the members of the visiting staff. In fact, it is well for the discussion to be participated in primarily by the interns before the more experienced visiting staff give their views. The knowledge that such cases are to come up for discussion and that the interns are expected to take part stimulates them in studying and informing themselves, and their participation in the discussion fixes the knowledge thus gained by study so that it is not soon forgotten. Participation in discussion also educates to a clarity of thought and expression, and gives a confidence in speaking before others that is invaluable later when the young practitioner desires to take part in discussions before his county society. The grouping together thus in a conference of the general surgeons, internists, laboratory and roentgen-ray men, and the different specialists whose fields may be invaded by the disease or injury, gives a group picture not only to the intern but to all concerned, which is more valuable than the expression of any single man in connection with it. This type of conference is postgraduate instruction of the most valuable type in which all participants are teachers and all are pupils. Such conferences are of quite as much value to the members of the visiting staff as to the intern, for attendance on these conferences soon teaches the visiting man that he himself must keep up with the times and must read on his subjects in order to keep pace with the recently schooled young graduate. Unless these conferences are participated in freely and with spirit they fall flat; but if there is freedom of discussion and controversial argument, they then become an intellectual game which is entered into with zest, making them attractive and interesting as well as instructive.

The medical and accident services of the hospital offer means for continuous and daily instruction in diagnosis as well as treatment that is not so easily obtained in the surgical service, where most of the time is devoted to operations and to the daily visits. For this reason, when the time available for instruction to the interns in diagnosis in the surgical service is insufficient, it should be the practice of the surgeon on duty to devote regularly, at a certain time during the week, one or two hours to a surgical ward walk with the surgical intern staff for the distinct purpose of using the cases in the hospital that are suitable for it for bedside instruction in surgical diagnosis. At that time the surgeon can discuss with the interns the operation or the treatment that is advisable. All surgical cases in the hospital should be available for this purpose with due regard to the ethics concerning visits of one physician to the patients of another. If the spirit in the hospital is as it should be among the visiting staff, difficulty will not be encountered in this respect. Not only will surgical treatment and diagnosis be taught on these ward walks, but ethics will be learned as well.

The monthly staff meeting, while more formal than the clinical conference and participated in by members of the visiting staff, is also an important feature in the instruction of the intern. It is not expected that the interns will take the same prominent part in these discussions that they do in the clinical conferences, but they should have the right and the opportunity to participate, so as to clarify in their own minds the ideas which they receive from the different speakers. Regularity, promptness and orderliness should characterize these meetings, or they will soon develop into a jumble of medical conversation out of which neither intern nor staff members will acquire that knowledge and clearness of ideas which constitutes real education. In these staff meetings the program may be varied, usually each meeting consisting of a symposium on some subject. The plan as outlined and recommended by the American College of Surgeons does much to promote efficient hospital service on the part of both visitant and resident, and is extremely instructive when well carried out; but other types of meetings can very well be held which will be equally instructive. The staff meeting should never be used by a member of the staff as a pedestal from which he can blazon forth to an admiring audience the acuteness of the diagnosis and the brilliance of his achievement in treatment. Little is learned in most cases from our successful endeavors, but much is learned from our failures, and one's dignity is not injured if one admits failure after conscientious endeavor. The intern does not need the stimulus of the brilliant achievement to spur him on. He is confident and ambitious when he comes to us and is more so when he leaves us. He rather needs the restraining hand that guides his observation to the difficulties, dangers and disappointments in medical practice which will bring reasonable and conscientious restraint on his early activities. This is particularly true in surgery.

AUTOPSIES

The policy of the hospital should be to obtain as large a proportion of autopsies as is possible, and the visiting staff can do much toward that end. Their support in obtaining autopsies is at times invaluable, and their

attendance at them increases the interest of the interns and promotes more careful and efficient postmortem examinations. The discussion of the postmortem observations in relation to the symptoms and conditions developed during life is a most valuable factor in teaching the interpretation of symptoms, and the routine postmortem has the greatest tendency to develop careful diagnostic work.

A SUITABLE LIBRARY

One of the most essential means for discharging our obligations to the intern of giving him proper instruction is a library. If the hospital as an institution will not supply a library for the use of the interns, buying for it the new books that come out from time to time, and subscribing for a reasonable number of journals, it should be the pleasure as well as the duty of the staff to contribute a sufficient amount of money to supply that need. Medical libraries are not freely available to most interns. They have not sufficient money to supply themselves with all the literature they want and need, and few if any of the physicians on the staffs of hospitals subscribe to a sufficient number of journals or buy a sufficient number of books to supply that want. But how can the instruction that has been received in the medical schools be continued without a well appointed library. With a well selected library of books and journals, a room must be found in which to house and use them. A place that is free from noise and interruption and from unrelated conversation and playing of games, with comfortable chairs and good light will do much to popularize the use of the library, and the more the library is used the higher will be the standard of the professional work in that hospital.

SHAPING THE INTERN'S OUTLOOK

Our interns come to us fresh from the medical school with all the enthusiasm of the graduate entering on his new life. The intern is as full of enthusiasm and the desire to work as a puppy is of play. By our treatment of him we can kill that enthusiasm, make him lazy and discontented, help him forget what he has so recently learned, and turn him out from our hospital with the one ideal of making as much money as he can with as little effort as possible. Or we can nurse his ardor, guide his efforts, teach him the practical uses of his knowledge and develop his ability and interests so that he leaves us with his enthusiasm unimpaired, but sobered and steadied by an appreciation of the responsibility that is his when he takes into his keeping the health and the life of those who entrust themselves to his care.

Much has been said and written lamenting the passage in our medical life of the beneficent influence of the old time preceptor. By assuming the obligation of the education of these young men in the practical details of the practice of medicine, the staff of the hospital has voluntarily taken on itself the function he previously assumed. The various duties herein enumerated are those that previously were accepted as his duties. How better can we prescribe the duty of the staff to the intern than to say, "The staff should be preceptor to the intern." That is its obligation, and the conscientious discharge of those duties by the members of the visiting staff will give the same satisfaction and pleasure as was experienced by the preceptor of old.

Guardian Building.

A HOSPITAL DEPARTMENT OF PHYSICAL THERAPY *

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Proof is rapidly accumulating that in localities where a properly conducted physical therapeutic clinic has been established there is distinct economic gain to the community at large as a result of the shortening of the time of disability of those industrially incapacitated. Statistics, furnished by companies specializing in industrial compensatory insurance, prove the concrete savings which should accrue. For example, in a recent report issued by the Aetna Life Insurance Company it is stated that the industrial rehabilitation clinic established by them at Syracuse, N. Y., has in fifty-one months, with 474 cases treated, shown a saving of $163,000 over the evaluation of the impartial state board. In arriving at these figures, every expense possible, including not only interest on equipment and depreciation of apparatus but also $15 a week for maintenance of these patients over the compensation allowance, was charged against this clinic.

To a civil hospital a department of physical therapeutics may mean increased expense or it may be a source of income. This depends on whether or not a charge is made for treatments. At the Boston City Hospital the expense has been greatly augmented; but even here, by lessening the stay in the hospital of patients, the same number of beds have served many more, hence theoretically lessening the per capita cost. On the other hand, at the Reconstruction and Beekman Street hospitals, New York, the physical therapeutic department not only is self-supporting but also adds an appreciable sum to the hospital income.

PERSONNEL

The director of a department of physical therapeutics should be a physician who has had special training in this subject; preferably, he should have had extensive clinical experience in the other departments of medicine and surgery; ideally, he should be on a full-time paid status. (As far as I know, the Tacoma [Wash.] General Hospital was the first civil hospital to adopt this policy.) At the Boston City Hospital there is a part-time assistant visiting physician, who is paid $1,800 a year. If the clinic warrants, the director should have one or more younger men whom he can train not only in physical therapeutic measures but also in clinical medicine. These assistants should be assigned for definite periods to other departments of the hospital, such as the surgical, especial attention being paid to the orthopedic and fracture clinics, and to such special subdivisions of the medical as may seem necessary to round out their clinical experience. This not only should give them a broader point of view but also should serve to acquaint them with the problems of the other departments.

Technicians.—Physical therapeutic technicians, still called in government service reconstruction aides in physiotherapy, basically should have had thorough grounding in anatomy, physiology, the analysis of muscle and joint motion, and scientific massage. While a knowledge of electrophysiology, and electrotherapeutic

* Read before the Annual Congress on Medical Education, Medical Licensure and Hospitals, Chicago, Feb. 15, 1927.

* Owing to lack of space, this article has been abbreviated by the omission of the illustrations. The complete article will appear in the author's reprints.

and hydrotherapeutic technic is desirable, yet it is not absolutely essential, as these subjects can be readily taught in any well organized department of physical therapeutics. Graduates of schools of physical education, or college graduates who have majored in physical education, have in my experience made the best technicians. Nurses, though often good, have not as a rule had sufficient basic training. A well trained technician is invaluable, not only in carrying out intelligently the treatments ordered, but also in observing and reporting symptoms and the reactions of the patients to their physical therapeutic prescription. If the carrying out of this procedure is insisted on, the daily work becomes interesting and does not deteriorate into a mere mechanical routine.

EQUIPMENT

The ideal department of physical therapeutics should comprise the following subdivisions:

1. Massage and muscle training.
2. Electrotherapy.
3. Hydrotherapy.
4. Mechanotherapy.

TABLE 1.—*Ideal Installation*

Maximum Equipment Includes:

1. Two large high frequency machines capable of delivering a heavy current for autocondensation and electrocoagulation.
2. Seven small portable high frequency coils for diathermy.
3. Three tables with large castors for portable high frequency.
4. Four galvanic sinusoidal machines.
5. Three Bristow faradic coils.
6. One galvanofaradic for nerve testing.
7. Six galvanic controllers with meters, preferably equipped with a pole changer.
8. Two electric vibrators.
9. Two 1,000 watt, deep therapy lights mounted on movable stand.
10. Eight portable light applicators (for radiant heat baking); these should contain from six to eight incandescent light bulbs.
11. Two ultraviolet air cooled lights.
12. One ultraviolet water cooled type light.

12A. Two infra-red lights, medium size, mounted on movable stand.

Supplementary List:

13. One static machine having sixteen revolving plates with insulated platform and accessories.

15 (*a*) One motor generator with sufficient power to A. C. into D. C. or numbers 4, 6 and 7.

(*b*) One rotary converter with sufficient current capacity for numbers 1 and 2.

Accessories:

A. Essential for galvanic, faradic and sinusoidal machines:

1. Sixteen round electrodes approximately the size of the palm of the hand (asbestos type).
2. Six 6 by 8 asbestos electrodes.
3. Twelve 4½ by 5½ asbestos electrodes.
4. Six 5 by 5 asbestos electrodes.
5. Twelve 3 by 9 asbestos electrodes.
6. One insulated rectal or vaginal electrode.
7. Two testing electrodes.
8. One special ear electrode.
9. Two special double eye electrodes.
10. One special tongue electrode.
11. One needle holder.
12. Two disk electrodes with handles.
13. Ten pounds of block tin, 24-26 gage.
14. Twelve pairs of rheophores, green and red.
15. Four 12-16 inch glass solution bowls.
16. Three pairs of special distributing rheophores with five cables, fitted on one end and with standard tip for treating fingers.

B. Essential for high frequency machines:

1. Four vacuum tube handles.
2. Six surface vacuum electrodes.
3. Two throat vacuum electrodes, curved type.
4. Two ear vacuum electrodes, curved and insulated type.
5. Two double eye vacuum electrodes, curved type.
6. One fulguration electrode.
7. Sixteen ace bandages, 3 to 4 inch.
8. Two metal tubes, 18 inches long and 2 inches in diameter.
9. One autocondensation mattress, on special requisition.
10. Nonvacuum surface electrodes.

C. Water Cooled Ultraviolet Outfit:

1. One applicator quartz—intranasal.
2. One applicator quartz—pharyngeal.
3. One set of applicators for pyorrhea.
4. One applicator quartz—large, square size.
5. One applicator quartz—round, small size.
6. Set of three quartz rods, assorted size—sinus applicator.
7. All necessary holders for electrodes.

Accessories for Special Machines:

Massage and Muscle Training:

1. Sixteen massage tables or plinths.
2. Sixteen mattresses for the foregoing.
3. One set of stall bars.
4. Adjustable bar for hanging exercises.
5. Six light-weight Indian clubs.
6. Six light-weight dumb-bells.
7. Four creeping wall boards for finger exercises.
8. One inclined track.
9. One set of stairs (these can be folded against the wall).

The plinths should be 6 feet 3 inches long, 2 feet 2½ inches wide, and 31 inches high. A shelf 8 inches from the floor will secure greater rigidity for the legs of the table and also may be used for surplus laundry. They can be readily built by the hospital carpenter. The number of plinths will depend on the available floor space; with a larger number of tables a greater number of patients can be treated in any given time. This does not mean necessarily an increase in the working force, as many cases require prolonged thermotherapy followed by electrotherapy and massage.

The mattresses should be stuffed with silk, floss or hair, and the ticking should be covered with a thin oil-skin cover similar to the material used for light-weight slickers. The odor from this material soon disappears, and as the mattress is covered with a sheet the patient does not have an unpleasant sensation of coldness.

In addition to the gymnasium apparatus, certain sections of the floor should be marked out for the Fraenkel exercises.

Accessories and Furniture:

These depend on local conditions. The following list is suggestive:

1. From twelve to twenty-one of the wide one-arm lunch chairs. These serve as supports for the upper extremities both for massage and for electrotherapy.
2. Electric fans, preferably the revolving type.
3. The proper filing cabinets.
4. Desks for the physicians and the secretary.
5. Typewriter.
6. Office chairs.
7. Waste paper baskets.
8. Sphygmomanometers.
9. Lockers for physicians, technicians, visitors, and for patients, especially in the hydrotherapy room.
10. Adequate laundry supply.
11. Wool blankets.
12. Electric sterilizer.
13. Hand basins and foot tubs, papier maché, wood or heavily enameled.
14. Bandage shears and dressing forceps.
15. Sterile gauze.
16. Bath room scales.

MINIMUM EQUIPMENT:

1. One large high frequency machine having sufficient current capacity for autocondensation and surgical diathermy.
2. One portable hign frequency for diathermy.
3. One 1,000 watt light, mounted on movable stand.
4. Three incandescent light applicators, eight lamp capacity.
5. One infra-red applicator mounted on movable stand — medium capacity.
6. One air cooled ultraviolet outfit.
7. One galvanic sinusoidal machine.
8. One galvanic controller with meter.

The price of these machines is dependent on the type of current available in the hospital. If it is alternating current, a motor generator must be supplied.

9. One Bristow faradic coil.

Accessories:

For High Frequency:

1. One autocondensation pad.
2. One metal handle for autocondensation.
3. Ten pounds of block tin, gages 18 to 22 (for diathermy).
4. One fulguration electrode.
5. One universal handle for vacuum tubes.
6. Two surface vacuum tubes.
7. One curved stem, double eye vacuum tube.
8. One curved stem insulated ear vacuum tube.
9. One insulated nasal tube.

For Galvanic, Sinusoidal and Faradic Currents:

1. One nerve tester with interrupted handle.
2. Six pairs of conducting cords.
3. Six asbestos type electrodes, 4 by 5 inches.
4. Six asbestos type electrodes, 3 by 9 inches.
5. Six asbestos type electrodes, 5 by 7 inches.
6. Two round electrodes, asbestos covered, with wooden handle.
7. Absorbent cotton or cellucotton.

For Massage and Reeducation:

1. Four massage tables or plinths of the same dimensions mentioned in maximum equipment list.
2. Four mattresses for the foregoing.
3. One set of stall bars.
4. One adjustable bar for hanging exercises.
5. Two pairs of light-weight Indian clubs.
6. Two pairs of light-weight dumb-bells.

An ideal installation, exclusive of expense of installation, will cost from $11,300 to $14,500. In such a department, in an eight hour day, 125 cases can be readily treated. A detailed statement of apparatus is given in table 1.

In many hospitals, neither space nor funds will permit ideal installation. In such cases the first two subdivisions, massage, muscle reeducation, and electrotherapy,

will suffice. The expense, exclusive of installation, of this minimum equipment will range from $4,000 to $3,000. With this equipment one technician can easily treat from sixteen to twenty patients daily.

The number and types of apparatus will vary greatly with local conditions, especially with the type of hospital —that is, whether it is pediatric, tuberculosis, mental or general; if the latter, whether surgical or medical cases predominate. It is well to install the minimum amount of apparatus and add to it in accordance with the particular local demands. The only exception to this rule is when some benefactor offers to donate equipment, in which case it is wiser to anticipate future needs. In ordering electrical equipment, care should be taken to specify the type of current used. If a hospital has its own power plant, ordinarily the 110 or 220 volt direct current is available. When the current is supplied by some power company it is generally the 110 volts, 60 cycle, alternating current. Some pieces of electrical apparatus, such as bakers, 1,500 watt lights, small vibrators, small motors, and the like, can run on either current. High frequency machines require the alternating current. Galvanic and sinusoidal apparatus demand the direct current. If both types of current are not available, it is necessary to have a piece of apparatus to change the one to the other. Thus, if the alternating current is available, a motor generator should be installed in order to supply the direct current for the galvanic and sinusoidal outfits. If, on the other hand, the hospital current is direct, a rotary converter should be used in order to deliver to the high frequency machines the necessary alternating current. It is better to install a rotary converter or a motor generator sufficiently large to meet the demands of all the machines for which it is intended. The small outfits, which frequently are supplied by the dealers with each separate piece of apparatus, are not only much more expensive but generally have just enough capacity to meet the demands of that particular machine. Hence heating and overloading are common, with the consequent annoyance of motor troubles. The installation of the larger power units entails extra wiring, but this is an economy in the end. Also, it is well to have these power units installed outside the department, thus eliminating the noise tire which will necessarily ensue if they are placed in the department proper. Apparatus for special hospitals is given in table 2.

SPACE

In most hospitals, existing space has to be modified in an attempt to meet the situation. Too often only a basement is available. In general, the following factors are to be considered: The hydrotherapeutic, ultraviolet and static apparatus should be placed in rooms that have outside windows to provide a means of egress for the steam or ionized air. In new construction, one or two plans, details for which are given in the accompanying illustrations, should be followed. These may be of the small separate rooms type which will accommodate not more than two patients (fig. 1) per room, or the large general treatment room type with smaller rooms for such subdivisions as hydrotherapy, ultraviolet, and static electricity (figs. 2 and 3). Where privacy is considered essential, the small room plan is best. The larger personnel required, however, makes it more expensive. In the large general treatment room type, one technician, with a little planning, can easily keep six cases simultaneously under treatment.

The floor covering should be of linoleum, or it may be made of insulite. One made of rubber is slippery, and artificial stone or cement not only is hard for the feet of the workers but also, if damp, may act as a "good ground." Cement or tile should be used in the hydrotherapy and whirlpool bath rooms. Both alternating and direct current lines should be wired to wall receptacles so dissimilar that it will be impossible to plug in an alternating current machine on a direct current line and vice versa. This prevents potential damage to apparatus or blowing out of fuses. As stated above, it is more economical to install a large enough rotary converter or motor generator to meet the current demands. If only one piece of apparatus is used, the means of conversion supplied by the dealer will suffice.

TABLE 2.—*Equipment for Special Hospitals*

A. Hospital in which industrial accidents predominate, averaging forty cases a day, with two technicians:
1. Four portable diathermy machines.
2. One air cooled ultraviolet.
3. Six radiant heat light applicators, four to eight lamp size.
4. Two Bristow coils.
5. Two galvanic sinusoidal machines.
6. Four massage plinths with mattresses.
7. Six asbestos electrodes, 6 by 8.
8. Six asbestos electrodes, 4½ by 5½.
9. Six asbestos electrodes, 5 by 5.
10. Six asbestos electrodes, 3 by 9.
11. Two universal vacuum tube handles.
12. Two vacuum and two nonvacuum surface electrodes.
13. One curved stem double eye vacuum tube.
14. One fulguration electrode.
15. One nerve testing electrode with interrupting handle.

B. Neuropsychiatric hospital of 100 bed capacity, with two technicians:
1. One or two electric light bath cabinets, ventilated type.
2. One control shower.
3. One control table with Scotch douche.
4. Five or six continuous baths equipped with Leonard thermostatic valves.
5. Two large type high frequency machines for diathermy and autocondensation.
6. One 1,000 watt light mounted on movable stand.
7. One infra-red applicator, medium size, mounted on movable stand.
8. One galvanic sinusoidal machine.
9. One faradic coil.
10. One air cooled ultraviolet outfit.
11. Four massage plinths with mattresses.
12. Accessory list similar to that given under industrial hospitals.

C. Tuberculosis hospitals of 200 bed capacity, with two technicians:
1. Three ultraviolet lights, air cooled.
2. One ultraviolet light, water cooled, with standard list of applicators.
3. Two 1,000 watt lights, mounted on movable stand.
4. Two portable high frequency machines for diathermy.
5. One galvanic sinusoidal machine.
6. Four massage plinths, standard size, with mattresses.
7. Accessory list similar to that given under industrial hospitals.

RELATION TO THE OTHER DEPARTMENTS OF THE HOSPITAL

The department of physical therapeutics should be a reference department only. No cases should originate there. No cases should be referred before careful physical and laboratory examinations have been made, and these records should precede the arrival of the patient. The final decision as to the particular physical therapeutic prescription to be followed must rest with the physician in charge of the department of physical therapeutics. From an educational standpoint, however, it is well to encourage the members of the other departments to make suggestions for treatment. If such suggestions are faulty or some other procedure will afford better results, the director of physical therapeutics should make such changes and by consultation with the suggester indicate the reasons for them. In fractures, the question of motion or degree of motion should be vested in the surgeon in charge of the case. In short, by cooperation and teamwork not only will the results be more uniformly successful but the patient, who should be the first consideration, will secure a square deal. All patients at stated intervals should report back to the department from which they originated for check-up, reexamination, and further suggestions for treatment.

UTILIZATION OF A DEPARTMENT OF PHYSICAL THERAPEUTICS AS A TEACHING CENTER

I. Medical Schools.—A. *Undergraduate Instruction.*—With the present curriculum, the medical school will find it difficult to make physical therapeutics a required course. However, two elective courses should be offered:

1. Elementary Physical Therapeutics: This should consist of six clinical lectures. This course will serve to acquaint the student with basic facts in physical therapeutics and will enable him to recognize at least some of the types of cases which would be benefited by this treatment. Also it should prove to him that physical therapeutics is not a separate cult but is an integral part of the triad of medicine, surgery and physical therapeutics, and that it should be employed only as an adjunct to other well recognized measures.

2. Advanced Physical Therapeutics: This should comprise at least twenty clinical and didactic lectures, together with as much actual clinical experience in the department as the press of other subjects will allow.

3. Required Physical Therapeutics: All students should be required to spend a part of their clinical surgical sectional assignments in the department of physical therapeutics. By this means they can visualize what is meant by the physical therapeutic prescriptions they see given in the surgical department. Although this is not obligatory at Harvard, many of the surgical sections take advantage of this opportunity.

B. *Postgraduate Instruction.*—Wherever possible, medical schools should arrange for such courses. They should be intensive. Their duration should be from three to six weeks. The morning work should consist of lectures, observation of cases, their physical therapeutic prescriptions, and demonstrations of technic. In the afternoon the student, under supervision, should administer the treatments. To be sure, these short courses serve only as the foundation on which with experience, professional skill and common sense the physical therapeutic superstructure is to be erected.

II. Training of Technicians.—Now that the supply of intensively trained, experienced war workers has been exhausted, replacements are of vital importance. There is no place where this is being done in an adequate manner, except perhaps at the Walter Reed General Hospital, Washington, D. C. Three plans are suggested:

A. A twelve months' course offered to graduates of schools of physical education and possibly graduate nurses. [The term twelve months is used advisedly, as there are at present some schools offering a year's course in physiotherapy in which analysis reveals that only eight or nine months are actually spent in instruction and clinical experience.] These students have acquired the basic principles. They should be enrolled and paid on the same basis as the student nurse. In addition to the regular physical therapeutic curriculum they should be taught professional ethics, first aid, bandaging, dressing of wounds, and replacement of splints.

B. A twenty-four months' course offered to high school graduates of exceptional intelligence and personality. They also, after a probational period, should be on the same status as the student nurse. Many of their lectures could be taken with the nursing force. More stress should be placed on anatomy, analysis of muscle movement and joint action than is ordinarily offered to the nursing force.

C. An eighteen months' course offered to those suitably qualified, with a tuition fee sufficiently high to minimize withdrawals. Voluntary free courses are not taken seriously enough in many instances, although we have trained a few exceptional technicians in this manner.

Details of these courses should be worked out by a joint committee chosen from members of the Council on Medical Education and Hospitals and the Council on Physical Therapy.

III. Instruction of the Nursing Force.—At the Boston City Hospital all nurses are given approximately three times the minimum instruction required by the American Nursing Association. It is our aim that they shall be able to use massage intelligently and not be mere rubbing machines. We go a step further and give them the rudiments of the other subdivisions of physical therapeutics and at least a slight bowing acquaintance with its technic. Theoretically, nurses should make the best technicians; practically, they are shy on the basic principles.

RECORDS

The record system will depend on local conditions. The unit system in many respects is the best, as on it a complete history with the clinical and laboratory examinations and all prescriptions have been recorded. Consequently, the director of physical therapeutics has in a compact form all necessary data. If each department keeps its own histories, then, of course, the department of physical therapeutics should not be an exception. Cross indexes of pathology and treatment are essential.

HOURS

A department of physical therapeutics should be open all day. At the Boston City Hospital the hours are from 8 a. m. to 4 p. m. Even though this clinic treats between two and three hundred cases a day, it has been found possible to install a successful appointment system. For example, twenty cases are scheduled for 8 a. m., twenty for 8:15, twenty for 8:45, twenty for 9, and so on, with the result that it is possible to treat more than 260 cases by 12 o'clock. Patients as a rule keep their appointments better than they do in private practice. This relieves congestion, minimizes the time spent by patients in waiting for treatments, and allows those who have been rehabilitated sufficiently to return to work but who yet need further treatment to receive it without undue encroachment on their working hours. If the force of technicians is sufficient, active work in the wards can be carried on all day. If not, the afternoon should be devoted to it. Preferably the transportable patients should be sent to the department of physical therapeutics in order to utilize to the utmost the available apparatus. In the new surgical wards at the Boston City Hospital, provisions have been made so that both alternating and direct current are available for each bed.

TYPES OF CASES

The types of cases are varied, and, with increasing interest on the part of the staff, are being augmented in number and variety. At present, rarely are the undesirables and the hopeless chronics dumped on the department in order to free the other departments from their presence. At the Boston City Hospital, more than 50 per cent of the cases come from the surgical side, ranging from fractures, discharging sinuses, indolent wounds, nerve injuries, acute traumas, malignant growths for surgical diathermy, surgical tuberculosis, tuberculous peritonitis, and bursitis. On the medical side, cases vary from neuritis, myalgias, herpes zoster, peripheral paralysis, arthritides, hypertension, thrombitis obliterans, pleurisy, bronchitis, anemia, atonic constipation, and pneumonia. The skin department sends acne, certain types of eczema, psoriasis, sycosis, ulcers and ringworm. The nerve department furnishes various functional neuroses, hemiplegias, and certain organic nerve lesions, especially for muscle reeducation. The other special departments also send their quotas.

CONCLUSIONS

A department of physical therapeutics is an economic gain to the community at large, and if not directly a source of revenue to the hospital yet indirectly, by shortening their stay there, will permit a given number

of beds to accommodate a larger number of patients and thus for all intents and purposes increase the bed capacity of the hospital without appreciable increased expense. Not only do the hospital and the community at large benefit from an economic standpoint but also the patient, who is returned to gainful occupations without impairment of function. It should also be noted that the same lesson holds true in civil life as it did in the military, that not infrequently those who without physical therapeutics would have been helpless cripples are returned to financial independence. Its director, a physician of broad clinical experience, should be well trained in physical therapeutic measures and ideally should be on a full-time paid basis. It should be a reference department only. The final prescription should be encouraged to make suggestions. Teamwork with the other departments should be insisted on. It should be utilized not only as a teaching center but also for research work. All cases should have been properly examined both clinically and by the laboratory before reference, and there should be a constant check-up and reexamination by the departments referring such cases in order that the final evaluation of results shall not in any way be enhanced by overenthusiasm and that data of scientific accuracy and interest may replace much that is at present open to just criticism. For then, and only then, will the true value of physical therapy be established.

520 Commonwealth Avenue.

THE HOSPITAL'S FUNCTION IN MEDICAL EDUCATION *

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The surprisingly rapid development of hospitals during the last twenty-five years is only a parallel to the marvelous improvements made during the same period in medical schools and medical education. Indeed, the developments of the medical school and the hospital were interdependent. When the medical course consisted of only two sessions of lectures of six months each, with or without the preliminary experience with a preceptor, the student had very little time for hospital work even if the medical school he was attending had access to a hospital. A review of the early announcements of medical schools shows that few of them had access to hospitals. Even when they had such access, clinics were not held with any regularity and, with one or two possible exceptions, students were not permitted to enter the sacred walls of the hospital. In the announcement of only one medical school, as far back as 1840, is there found even a hint of hospital instruction in any way resembling modern ward walks or bedside instruction.

It was not until after the medical course was extended to three years in the latter eighties and to four years about a decade later that relationships between medical schools and hospitals began to be established. Such clinical instruction as was given in these early times consisted mainly of demonstration clinics—the so-called college clinics in which patients brought from the college dispensary were examined before the students in the sometimes mammoth college amphitheaters. Clinical material was furnished by hospitals in only a few colleges which were in close proximity to a city or state hospital and in which certain members of the school faculty were on the hospital staff. Dispensaries or outpatient clinics were more generally established in the medical schools.

CHANGES SINCE 1900

During the college session of 1906-1907, when the first complete inspection of medical schools was made by the Council of the 162 medical schools then existing, sixty-three, including eight two-year schools, did not have any hospital connections whatever; thirty-one had only occasional clinics, usually surgical; fifty-seven had clinics in hospital amphitheaters; five had hospital ward walks scheduled, and six had hospital privileges whereby students under supervision could write histories or examine and care for ward patients. Marvelous changes have resulted since that time. In 1908, after the council's first inspection was completed, a schedule of the "Essentials of an Acceptable Medical College" was published,[1] in which access to a hospital and control of teaching material were included. Since then, the grading of medical schools has depended considerably on the possession and use made of hospital material. Thereafter, whether resulting from this ruling or not, closer relationships between medical schools and hospitals were rapidly brought about.

Some difficulties arose through the objections by patients to the admission of medical students to hospitals. To meet this difficulty, in some hospitals the students were required to wear white coats and were referred to as the "young doctors," and their presence in the hospital was taken more as a matter of course.

The value of an internship in a hospital following graduation had become recognized, and students in increasing numbers sought to obtain them. From the beginning of its work in 1904, a year's internship, also, was urged by the Council as an important part of the young physician's training. Statistics collected in 1913, however, show that, of the approximately 4,000 hospitals then existing, only 852 were at all interested in interns. Of these, 508 hospitals were included in the Council's first list which, in 1914, was printed for the guidance of students seeking internships. These hospitals had a total of 88,000 beds and provided only 2,667 internships each year—not nearly enough for the 3,981 students who graduated in 1913.

RESULTS OF IMPROVEMENTS IN MEDICAL EDUCATION

The interdependence between medical schools and hospitals is further illustrated by the results of the rapid improvements in medical education. With the adoption of higher entrance requirements by medical schools, the character and intelligence of the average medical student were raised to a remarkable degree. The requirement of the student of one or two years of college training for admission to medical schools practically eliminated buffoonery and rowdyism from the medical student body. These changes removed the objections to the presence of medical students in the hospitals, and also changed the attitude of hospitals toward interns. Instead of there being too few places for all graduates in medicine, the demand for interns soon became so large that there were not enough students to meet it. This reaction was due not only to the higher type and better training of medical students but also to the greatly increased number and capacity

* Read before the Annual Congress on Medical Education, Medical Licensure and Hospitals, Chicago, Feb. 15, 1927.

1. A. M. A. Bull., May 15, 1908, pp. 268-270.

of hospitals. As will probably be recalled, in 1909 there were only 4,359 hospitals with 421,056 beds, but by 1918 the number and capacity had increased to 5,323 with 612,251 beds and, by 1925, to 7,370 hospitals with 813,926 beds.

HOSPITALS AFFILIATING WITH MEDICAL SCHOOLS

At the same time that the hospitals were increasing in number, their relationships to medical schools became more intimate. At the present time, altogether 317 hospitals are more or less related to medical schools in the training of physicians. There are now forty-nine hospitals which are both owned and controlled by medical schools, and thirty-seven in which, although separately owned, the entire clinical material is controlled by medical schools for teaching purposes; in forty hospitals, generous privileges are being utilized in the training of medical students; in sixty others, to an average degree, facilities are being used in medical education and, in 131 others, facilities are being used to a lesser extent. Of these hospitals, eighty-two are adjoining or in close proximity to the medical schools, the others being from three blocks to four or five miles distant. There are probably a score or more of other hospitals to which medical students go occasionally for training in such limited branches as contagious diseases, tuberculosis, and nervous and mental diseases.

HOSPITALS NOW USING INTERNS

At present, instead of there being too few hospitals using interns to provide for all graduates in medicine, the demand could not be met even if the number of graduates each year was doubled. The increased demand has made it possible to select for approval those hospitals in which the internship is sufficiently educational to be an actual fifth year of clinical instruction and to round out the students' training in general medicine. From the 508 hospitals which in 1914 were included in the council's first list of intern hospitals, all but general hospitals have been eliminated or transferred to other lists. Nevertheless, the number has been increased to 575. These hospitals have a total of 132,037 beds and provide places for 3,825 interns, yet they are still inadequate for the 3,962 students who graduated in 1926. The change in the number of hospitals approved represents the net increase. As a matter of fact, 330 hospitals, after careful investigations, have been added to the list, including sixty-six which were reinstated, but 263 others have been dropped for various reasons, chiefly for not providing a satisfactory training. Although its growth numerically has been small, the list represents a great improvement from the standpoint of education and efficiency. Besides being the rounding out process of the student's general medical training, the hospital internship has now become the basis for higher training for either general practice or for specialization.

With the great increase in the number and capacity of hospitals there have come about, not only closer affiliations with medical schools and a larger use of recent graduates as interns, but also the employment, by hospitals which were unable to obtain interns, of medical graduates at varying stipends, to serve as house physicians, who may or may not have previously completed a general internship. The bringing in of these more recent graduates with their greatly improved medical training has resulted also in bringing to the hospitals ideas regarding the later and more improved methods of diagnosis and treatment.

ADVANCED INTERNSHIPS OR RESIDENCIES

With the securing of larger numbers of interns there has developed also, in the larger hospitals particularly, the practice of selecting from among the interns those of special merit, who are retained for one or more years as residents, who devote all their time to either the medical or the surgical side of the hospital as house physicians or house surgeons. Some of these residents continue in the hospital for three or four years to perfect themselves further in the specialty chosen. Thus, through residencies in the specialties, which are being provided in a rapidly increasing number of hospitals, the educational function of hospitals is being developed in the field of graduate medical education.

By 1922, the hospital internships had come to be recognized as a proper basis for further graduate study leading to a higher preparation either for general practice or for some specialty. Up to that time little if any attention had been paid to the number of hospitals which provided residencies. While listing approved graduate schools, therefore, a list was prepared also of hospitals in which satisfactory residencies in the specialties could be obtained. By 1925, just fifty hospitals after investigation were listed as approved. During 1926, however, as the result of a persistent effort, the number was further increased to 284. The agreement with hospitals regarding residencies in the specialties is that they will accept as residents only physicians who have already completed internships in general hospitals.

GRADUATE MEDICAL SCHOOLS

Hospitals are further fulfilling their educational function through increasing relationships with other lines of graduate medical education. In 1920, about a score of the so-called postgraduate medical schools or policlinics were existing, but from their printed matter the value of the instruction furnished could not be ascertained. Since the publication, in 1922, of the "Principles of Graduate Medical Schools," there has been developed a list of forty-one institutions in the United States in which acceptable courses of graduate medical instruction could be obtained. To this list, after investigation, nineteen institutions abroad have been added.

A PERIOD OF REMARKABLE ADVANCEMENT

In recent years the term "fifty years" has become a term to conjure with. Several years ago a statement was made in regard to the advancements in medical education and practice that "more progress has been made in the last fifty years than in as many previous centuries." This statement has been made also in regard to the advances in chemistry, in physics, in astronomy and in other lines of human activity—facts that have been demonstrated through the development of the automobile, cement roads, the movies and the radio. The statement applies equally to the marvelous development of hospitals and the increasingly important place they are occupying in medical education and medical practice.

A LARGER EDUCATIONAL FUNCTION

A modern hospital may become a center in which all physicians in the surrounding community, including those on its staff, can be kept informed regarding the later and more valuable methods of diagnosis and treatment. It can do much also to educate the public in reliable measures for the prevention or cure of diseases.

Not only will those who come to the hospital as patients be thus benefited, but also, through visiting nurses and social service workers, correct ideas regarding reliable methods of health preservation can be carried to other persons in the community. The importance of the hospital's function in this respect is evident to all who have knowledge regarding the increasing numbers of pseudoscientific fads and frauds that are being foisted on the public, who otherwise would be unable to differentiate between them and the many scientific and reliable measures that are now being used.

HOSPITAL SERVICE AT HIGHEST POINT

The hospital has reached a higher point in its development than ever before and is rendering a greater service to sick and injured humanity. In the modern teaching hospital a patient is more certain to secure intelligent and skilled treatment than in any other place. The buildings are more spacious and are fireproof; the elaborate equipment makes full provision for prompt and septic care in emergencies; fairly adequate staffs of assistants, nurses and interns are provided and, most important of all, most of them have staffs of conscientious, thoroughly trained and skilled physicians. The hospital of today, indeed, comes nearer to fulfilling the ideal than ever before. There is still ample room for progress, however, which should steadily be maintained. There should not be retrogression. The general trend should continue upward, stimulated by the further rapid developments in medical education and practice. Since, during the last fifty years, the life of every individual, on the average, has been extended from forty to fifty-eight years, what can be expected during the next fifty years with the more extensive and concerted efforts toward the prevention of disease and an improved physical development of the public?

OPPOSING INFLUENCES AT WORK

Every advance movement is bound to encounter opposition, and the improvement of medical education and practice is not an exception. These improvements have been so rapid that the public could not keep pace with them. Many new and efficient methods have been established for the treatment or care of diseases, but there has been also an increasing number of purposely misleading or false schemes foisted on the public by self-seeking individuals whose chief aim is profit rather than service to humanity. Such hindrances to progress come both from within and from without the medical profession. It sometimes happens that conscienceless physicians misuse a hospital to conceal unethical or criminal methods of practice behind a few ethical physicians on the staff who ignore, whether purposely or not, the other members' misdeeds. It is in these hospitals also that the chief evil resulting from the time-worn problem of fee splitting is commonly found. This danger results not so much from the dividing of the fee as from the performing of operations without accurate diagnosis or when the operation is known to be unnecessary. These evils come within the field of medicine and are now being strongly opposed by all reputable physicians.

DANGER FROM UNQUALIFIED PRACTITIONERS

Mention has already been made of the highly complicated and technical procedures developed along with the rapidly increasing knowledge regarding diseases. The success of such methods requires a developed skill in their use based on a thorough training in regard to the normal and abnormal structures and functions of the human body. In skilled hands such methods will same many lives and relieve much suffering. In unskilled hands, however, such methods may result in the immediate death of the patient or in leaving him an invalid for life. Herein lies the danger from permitting low grade physicians or irregular practitioners of any type to treat patients in hospitals. In some states, irregular practitioners are endeavoring to force their way into regularly organized hospitals. Since the first essential of any hospital is a highly trained, efficient and skilled staff, this effort, if successful, will counteract or destroy the results toward which the hospitals have been so earnestly striving. If ignorant, conscienceless or mercenary persons are thus enabled to force their way into hospitals, instead of their being havens of safety for sick and suffering people they will become places of actual menace. Numerous instances could be related in which not only have patients cared for in hospitals by unskilled or ignorant practitioners died unnecessarily, but the lives of the hospital's other patients have been endangered through the bringing in of unrecognized contagious diseases.

HOSPITAL TRUSTEES RESPONSIBLE FOR STAFF

It is the hospital trustees or directors who are morally, if not legally, responsible for the safety and care of the patients cared for in the hospital. It is for them to decide, therefore, who shall and who shall not be given hospital privileges, and they are fully justified in refusing those privileges to any one, whether he is a physician or any other type of practitioner, if for either moral or professional reasons he is believed incapable of providing intelligent and efficient treatment for sick persons. That the trustees will be acting within their legal rights by safeguarding the hospital from inferior physicians is evidenced by the fact that in every instance in which legal proceedings have been resorted to by those refused admission to hospitals, the trustees have invariably been upheld.

HIGHEST ESSENTIALS IN EVERY HOSPITAL

To maintain in a hospital the highest degree of service to humanity requires that the attending physicians not only possess the essential knowledge regarding the cause, cure and prevention of diseases, but also have developed a reasonable degree of skill in the recognition of diseases under skilled teachers in the examination and treatment of patients in dispensaries and hospitals. The moral character of the staff should also be maintained to a high degree, and any one who abuses his hospital privileges should be promptly removed. If these essentials are maintained, the patients' welfare will be safeguarded even though there may be shortcomings in the way of buildings and equipment, and in other respects. A staff of conscientious and well qualified physicians will not only see that the highest service is rendered to the patients but also that the educational function of the hospital will be raised to the highest possible degree. As frequently stated, a hospital's threefold function is (*a*) the best care of its patients; (*b*) the training of nurses, medical students, interns and physicians, and (*c*) the adding of its quota to the rapidly accumulating knowledge regarding the cause, prevention and cure of disease. Each of these functions is best fulfilled only when the other two are equally well performed.

In addition to what is already being done toward the improvement of its educational function, the hospital's service should be still further extended through the

development of the spirit of active research in each institution. Through more postmortems and more pathologic conferences the accuracy of diagnoses can be checked, and through more research the value of the treatment used can be determined and knowledge regarding other improved methods can be ascertained. Thus, the development of clinical research will add greatly to the service which hospitals are already rendering to humanity.

535 North Dearborn Street.

PERINEAL PROSTATECTOMY UNDER SACRAL ANESTHESIA

ONE HUNDRED AND SEVEN CONSECUTIVE CASES WITH ONE DEATH *

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OMAHA

This paper has to do primarily with the mortality of prostatectomy. It is perhaps a surprising statement that this operation, in spite of the age and impaired renal function and general debility of the average candidate, has come to be classed among the comparatively "safe" surgical procedures. There are certain of the lesser major operations (among them, appendectomy and herniotomy) which may be undertaken almost without anxiety, on account of the minimum risk involved. In fact, there is, unfortunately, a growing tendency among members of the laity and the profession, secure in their reliance on modern antisepsis and technic, to ignore this risk entirely. As a result of this too great faith, there arises a certain percentage of unnecessary surgical tragedy. Those who know through experience realize that the hazard of surgery may be reduced to a minimum but may never be entirely eliminated; that, in spite of the utmost possible in diagnosis and technic, there will remain a low percentage of risk, because of factors which, in the present state of our knowledge, may be neither prevented nor controlled. Chief among unexpected mishaps, because often so conspicuously tragic, is postoperative embolus. The occasional postoperative pneumonia, or virulent infection at the site of operation, will occur, as will the occasional sudden death from anesthesia alone. Therefore, not any operation is "safe," unless this term is used in its relative sense.

Mortality and Complications of Perineal Prostatectomy

Consecutive cases	107
Deaths	1
Average age	70
Above 70	53
Above 80	10
Epididymitis	11
Rectal injury	1
Urethrorectal fistula	0
Persistent urinary fistula	1
Incontinence	0
Unsatisfactory urinary control	3

To return to my original statement, the figures of others, as well as those given in the accompanying table, will show that the mortality of prostatectomy (properly handled) compares very favorably with that of the lesser of the major surgical procedures, and that prostatectomy may therefore be classed among the "safe" operations. To appreciate this statement in its full significance one must bear in mind that we are comparing with operations ordinarily performed in young adult life, and that prostatectomy on a patient in good physical condition is decidedly the exception. Primarily, this is an operation of old age, the average age being 70. In addition to the cardiovascular changes and other debilities incident to old age, there is often the renal injury and uremia resulting from long neglected residual urine, so that these patients not infrequently may literally be termed human derelicts. A low mortality rate therefore becomes doubly significant.

By way of comparison, it is of interest to know what may be accomplished in other surgical fields to minimize mortality. With respect to the mortality of appendectomy, Guerry [1] is to be congratulated on his figures recently reported. In his series of 2,959 consecutive unselected cases of appendectomy, including both chronic and acute appendicitis, and cases with localized abscess formation and general peritonitis as well, there were only sixteen deaths, a mortality of 0.54 per cent. This is a splendid record, and is of increased value because of the large size of the series. Similarly, herniotomy, properly handled, may be placed in the almost riskless class. Walters [2] at the Mayo Clinic has reported a series of 189 consecutive cases without a death.

The present report includes 107 consecutive cases of perineal prostatectomy with only one death, a mortality of less than 1 per cent. While this is a good record, it is not particularly unusual, since larger consecutive series, with lower mortality rates, have been reported by others. Cecil [3] has reported 100 consecutive cases with a mortality of 2 per cent, and Hinman [4] a series of eighty-one without deaths. Hunt's [5] recent report includes 204 cases with but three deaths, while Young [6] has reported several large series, his largest published number of consecutive cases without a death being 198. Therefore, since large series of cases of prostatectomy, with surprisingly low mortality rates, have been reported by different operators, it is clear that such results may be consistently accomplished by careful effort, and are not due to good fortune alone or to mere chance. In this connection it is of interest to recall that prostatectomy has not always been the benign procedure that it is today. To quote from Young,[7] "Twenty years ago, the general mortality from prostatectomy was greater than 20 per cent; now it is almost nil."

ADVANCES IN PROSTATIC SURGERY

This conspicuous lowering of the mortality rate of prostatectomy has been due largely to four factors:

1. The general recognition by the profession of the value of preoperative drainage.
2. The growing enlightenment of the public, with consequent knowledge of the increased danger of delay.
3. The increasing popularity of sacral anesthesia.
4. More careful attention to hemostasis.

Of these four, the first is by far the most important. The necessity for preoperative drainage (either by the indwelling catheter or through a suprapubic tube) is a

* From the Department of Urology, University of Nebraska College of Medicine.

1. Guerry, L. G.: Mortality in Appendicitis, Ann. Surg. **84**: 283 (Aug.) 1926.
2. Walters, Waltman: Personal communication to the author.
3. Cecil, A. B.: Perineal Prostatectomy: A Detailed Study of One Hundred Consecutive Cases, J. Urol. **6**: 399 (Dec.) 1921.
4. Hinman, Frank: Structural Results of Prostatectomy with Reference to Methods of Enucleation, Arch. Surg. **4**: 154 (Jan.) 1922.
5. Hunt, V. C.: Treatment of the Surgical Patient Handicapped by Urinary Obstruction, Surg. Gynec. Obst. **42**: 187 (Feb.) 1926.
6. Young, H. H.: Prostatectomy: Preoperative, Operative and Postoperative Treatment, Surg. Gynec. Obst. **36**: 589 (May) 1923.
7. Young, H. H.: The Technic of Prostatectomy and Its Relation to Mortality, J. A. M. A. **78**: 933 (April 1) 1922.

subject that has been emphasized in numerous publications during the last decade, and need not be dwelt on here. It is now recognized that there is a lurking danger in attempting an immediate prostatectomy, even with the patient who appears to be in the best of condition. Hunt's [5] figures on this subject are most significant and offer an unanswerable argument. In analyzing a series of 1,783 cases of prostatectomy, Hunt divides these into three groups:

1. Poor risks (preliminary suprapubic drainage), 437; mortality, 7.5 per cent.
2. Average risks (preliminary catheter drainage), 680; mortality, 3.2 per cent.
3. Good risks (without preliminary drainage), 666; mortality, 6.6 per cent.

These figures, compiled from a series sufficiently large to eliminate coincidence, clearly indicate that the mortality rate following prostatectomy without preliminary drainage, in patients considered to be the best surgical risks (6.6 per cent), is almost equal to the mortality rate among patients considered to be the poorest surgical risks but who received preliminary suprapubic drainage (7.5 per cent). In other words, suprapubic drainage gives the patient who is a poor risk a chance equivalent to that of the patient who is a good risk without drainage. Furthermore, Hunt's figures indicate that the mortality among the best risks without drainage (6.6 per cent) is twice that among the average risks with preliminary catheter drainage (3.2 per cent). It is therefore a most conservative statement that to omit drainage (in any case) is to more than double the risk. Some go so far as to adopt the two-stage operation as a routine in all cases.

The growing enlightenment of the public, with the consequent correction of the popular fallacy as to the fatality of prostatectomy, and with earlier recognition of symptoms, has given the surgeon the opportunity for surgical intervention before the patient has become hopelessly uremic. There are now comparatively few candidates for prostatectomy who are not able to number among their friends and acquaintances those who have come safely through operation. With the dread of this operation lessened, the tendency toward postponement is decreased, and an opportunity for a lowering of the mortality rate thus provided.

Sacral anesthesia, as applied to perineal prostatectomy or to suprapubic prostatectomy, and including details of technic and tabulation of results, has been described by several authors (Lewis and Bartels,[8] Scholl,[9] Meeker,[10] and Davis [11]). Shaw [12] has recently reported 100 consecutive cases of perineal prostatectomy (in Young's clinic) in which the patients were anesthetized by this method. The negligible risk of sacral anesthesia, and the results obtained, speak for themselves. Since details of technic have been covered elsewhere, it is sufficient here simply to mention sacral anesthesia by way of emphasizing its value. On account of the confusion which still exists relative to the distinction between sacral and spinal anesthesia, it is important to point out again that the former is extradural, and consequently does not carry with it the risk of sudden death. When used for suprapubic prostatectomy, sacral anesthesia must of course be employed in conjunction with infiltration anesthesia of the abdominal wall. The complete perineal operation, however, may be done painlessly, following the use of a single injection through the sacral hiatus (caudal anesthesia), although the small percentage of cases in which imperfect anesthesia is obtained may be further minimized by supplementing this single (caudal) injection by injections through each of the upper four sacral foramina on either side; the so-called sacral block. Sacral anesthesia therefore has its ideal application in prostatectomy via the perineal route.

Complete hemostasis is dependent on care and deliberateness at operation, and on the employment of some mechanical device (rubber bag) to maintain temporary pressure following operation. Both of these methods of hemostasis are applicable to either the perineal or the suprapubic route. Preliminary drainage is also a factor in the control of bleeding, through lessening the congestion of the gland. Sacral anesthesia is of distinct advantage in hemostasis in minimizing the immediate hemorrhage (probably through a lowering of blood pressure), and in permitting time for the careful ligation or suture of bleeding points. The Hagner and the Pilcher bags, for use following suprapubic prostatectomy, are familiar to those doing prostatic surgery. A bag providing for both hemostasis and drainage following the perineal operation has been recently described [11] and hence need not be considered here in detail. Suffice it to say that by the use of this bag the postoperative course of the average case of perineal prostatectomy (as has been demonstrated by dried, photographed dressings) may be made literally bloodless. It is quite true that postprostatectomy bleeding will usually cease spontaneously, either early, through the ability of the blood to coagulate, or later, when the pressure has dropped sufficiently. Yet, to have subjected an aged patient to a bloodletting at a critical time has not improved his chances of recovery.

CHOICE OF ROUTES

In considering the relative mortality rates of the perineal and suprapubic routes, it should be remembered that the foregoing factors (preliminary drainage, sacral anesthesia and hemostasis) are of far greater importance than is the choice of routes. In fact, provided the operator is familiar with either route, whether he chooses the perineal or the suprapubic is not of any particular consequence in the average case. Large perineal and large suprapubic series have been reported by different operators, each with very small mortality rates. Hunt states the matter very fairly in considering that "an unprejudiced analysis of the ultimate functional results and mortality rates following both methods of operation by those experienced in them shows that these indices of merit can no longer be utilized to discredit one or the other method." It is an opinion commonly expressed by suprapubic advocates that the perineal operation should be reserved for the particularly old and debilitated, because of the dependent drainage, and the lesser degree of postoperative shock. This, of course, gives the perineal advocate the opportunity to inquire why a procedure more suitable for the patient who is a poor risk should not also be more suitable for the average risk. The fact is that either method is good in proper hands. If less risk is

8. Lewis, Bransford; and Bartels, Leo: Caudal Anesthesia in Genito-Urinary Surgery, Surg. Gynec. Obst. **22**: 262 (March) 1916.
9. Scholl, A. J.: Sacral Anesthesia in Urology, J. Urol. **6**: 149 (Aug.) 1921.
10. Meeker, W. R.: Regional Anesthesia in Surgery of the Prostate Gland and Bladder, Journal-Lancet **44**: 1 (Jan. 1) 1924. Meeker, W. R., and Bonard, B. E.: Regional Anesthesia in Gynecology and Obstetrics, Surg. Gynec. Obst. **37**: 816 (Dec.) 1923.
11. Davis, Edwin: Perineal Prostatectomy, with Particular Reference to Sacral Anesthesia and to Hemostasis, J. A. M. A. **83**: 1988 (Dec. 20) 1924.
12. Shaw, E. C.: Epidural Anesthesia for Perineal Prostatectomy: An Experimental and Clinical Study with Report of One Hundred Consecutive Cases, J. Urol. **15**: 219 (March) 1926.

granted for the perineal route, less technical difficulty must be granted for the suprapubic, and less danger of injury to the rectum and to the external vesical sphincter. In the use of sacral anesthesia, the necessity of infiltration of the abdominal wall is done away with by the perineal route. It is my opinion that after the perineal operation the patient is more likely to have a smooth and uneventful convalescence, untroubled by postoperative shock and abdominal distention, and without passing through what may be termed a critical period. This opinion is based on a rather unique opportunity for observation, consisting of a three-year hospital internship where only suprapubic prostatectomies were done, followed by a second three-year internship in an institution in which the perineal route was followed almost exclusively. Since this paper is primarily concerned with a consideration of mortality, further discussion of the details of operative technic has been purposely omitted.

MORTALITY

The table indicates only one death in a series of 107 consecutive cases. This patient, aged 91, but apparently well preserved and with good kidney function, did well the first forty-eight hours and then died suddenly after a few minutes of cyanosis and rapid pulse. An autopsy was negative. Out of consideration of the patient's age, this death might, of course, have been avoided by better statistical foresight. This patient was the twenty-second case, leaving a consecutive series of eighty-five not as yet interrupted.

Follow-up letters have shown that there have been at least six subsequent deaths (most of them cardiovascular causes) occurring during the two years since the series was started. The most conspicuous of these deaths was that of a man, aged 84, who died suddenly in an anginal attack three months after his operation. It speaks well for the low risk of perineal prostatectomy under sacral anesthesia that this death did not occur on the operating table. Of the six subsequent deaths reported, at least two were due to cerebral hemorrhage.

Not included in this series are three patients who died following suprapubic drainage, without prostatectomy. One died months later with ascites secondary to myocardial changes. The second death, occurring two weeks after the drainage operation, was due to cardiac decompensation, present at the time of the suprapubic drainage—the latter procedure having become imperative on account of impossible catheterization. The third death was due to acute general sepsis, following faulty urethral instrumentation. It has been suggested that these should properly be classed as prostatectomy deaths, although each of these operations was undertaken (in the presence of distinctly apparent contraindications to prostatectomy) on account of the imperative need of immediate bladder drainage. Probably these deaths (certainly the third one) were due primarily to prostatic enlargement, with consequent urinary obstruction. Yet, clearly, not one of them was a prostatectomy death; and it is equally clear that none of these patients could have been saved by prostatectomy.

COMPLICATIONS

Fistula.—As indicated in the table, there was one case of rectal injury at operation. In this instance a urethrorectal fistula was prevented (as it always may be prevented) by closing the perineal incision and immediately performing a suprapubic drainage, postponing the enucleation of the gland, and thus converting the procedure into a two-stage suprapubic operation. The series includes one case of persistent perineal urinary fistula lasting the better part of a year, and which will probably prove to be permanent unless there is operative intervention. Excepting this one case, the average time of closure of the perineal fistula was twenty-three days. This figure does not include the small percentage of patients whose wounds reopened and drained for a brief period of time after their return home.

Incontinence.—While there are not any cases of complete incontinence, there are three in which the control of urination is not satisfactory. While each of these patients has intervals of complete dryness and has the ability to start and stop the urinary stream at will several times while voiding, there is a weakness of the external sphincter, as indicated by leakage, at intervals, of small amounts on any undue exertion, such as coughing or sneezing or suddenly rising. Since these patients have intervals of complete dryness, and since they have the ability voluntarily to start and stop the urinary stream, it is evident that a sphincteric structure exists, and it is therefore logical to consider the possibility of individual anatomic variation in the musculature or innervation of the external sphincter. I have under observation at the present time a patient with this identical type of sphincter weakness following suprapubic prostatectomy. In this connection I do not intend to minimize the possibility of external sphincter injury by the perineal operation. It is to be frankly stated that this is a very real danger, particularly in those cases in which the internal sphincter has been rendered functionless by the gland itself. While these patients have not a complete incontinence, the amount of leakage is such as to subject them to a very considerable degree of inconvenience. If less risk by the perineal route is conceded, the danger of sphincter injury must not be overlooked. One of these three patients has signs of beginning tabetic cord changes.

Epididymitis.—There were eleven cases of postoperative epididymitis, including only those cases that developed during the immediate postoperative convalescence, prior to discharge from the hospital. This is often a trying and a discouraging complication, occurring, as it frequently does, after weeks of confinement, and at a time when the reserve of patience and morale has been all but consumed. Epididymitis, however, is not of serious consequence, if suppuration is detected early and drainage instituted.

SUMMARY

Advances in prostatic surgery during the last decade have resulted in a lowering of the risk of prostatectomy, so that the mortality of this procedure may be compared very favorably with that of the lesser major operations (appendectomy and herniotomy), ordinarily performed on young and strong persons. It is a conservative statement that the risk of prostatectomy, when indicated, is decidedly less than the risk of postponement. As indicated by the age figures submitted in the table, the low mortality rate of the series was not dependent on an elimination of all but the good risks. The average age was 69.85, practically 70. There were fifty-three patients above the age of 70, and ten above 80, two of those who survived being 88.

520 Bankers Reserve Life Building.

EXTERNAL HEAT A CAUSE OF FEVER IN CHILDREN *

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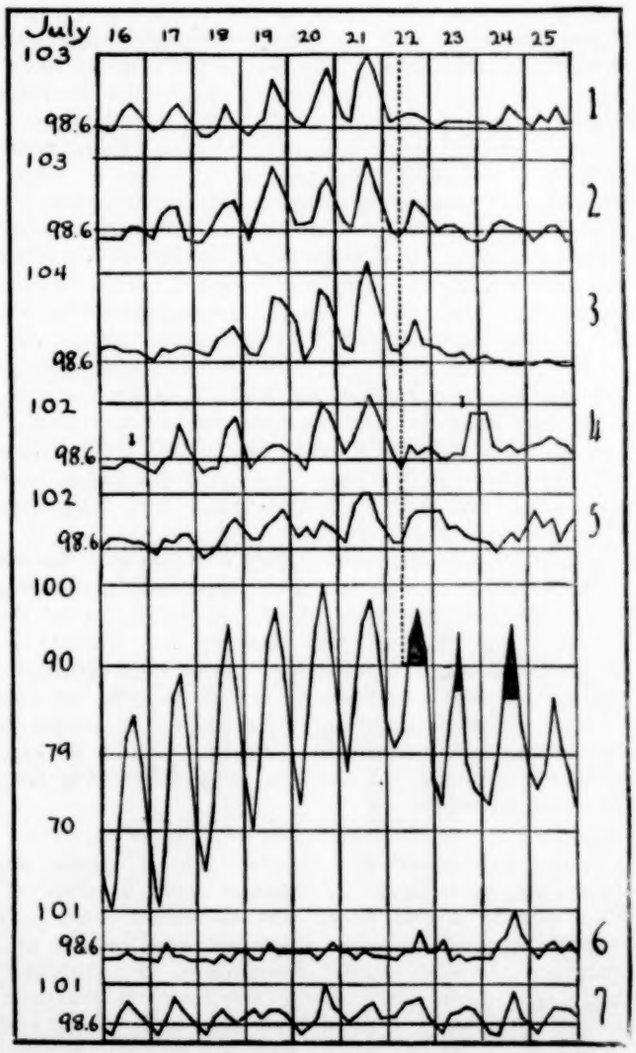
It is well known that the body temperature of premature and of very young infants varies considerably in accordance with the temperature of their environment. Older infants have a more efficient heat regulating mechanism, and if they are well nourished and in good health they are able to maintain a normal body temperature when exposed to the usual fluctuations of external heat. In discussions of the causes of obscure fevers in children very little mention is made, either in pediatric textbooks or in special articles, of extreme degrees of external heat as a cause of fever in young children. Meyer [1] notes several cases of heat stroke in infants during an extremely hot summer in Berlin. These cases amounted to 4.2 per cent of the total cases of illness in the Waisenhause der Stadt Berlin during the summer. Several cases terminated fatally. Abt [2] says, "Transitory elevations of temperature frequently occur which seem to depend upon bodily movements, taking of food and the external temperature." Talbot [3] is more definite: "When infants are submitted to excessive heat their body temperature becomes elevated, they become restless and perspire profusely, and very often the respirations are as high as 180 to the minute." However, in other standard pediatric textbooks and in a considerable number of articles on causes of obscure fever in children, we were unable to find further mention of excessive heat as a possible cause of fever.

In July, 1926, during a week of extreme heat and very little air movement, we observed elevated body temperatures in five white infants. Previous to this week the children had been afebrile or practically so, with the exception of one child who had a mild otitis media. The children were well nourished and were gaining weight. They were out on a porch where the direct rays of the sun did not reach them and where the circulation of air was moderately good. Prior to this week the weather had been cooler than normal for this time of year. Early in the week the temperature began to rise and there was very little cooling at night. On the first day with a peak of 95 F., every child had a temperature of 100 F. or over. The following days, as the maximum temperature of the air became 100 F. or slightly less with a minimum temperature of from 75 to 85 F., the children had a marked afternoon fever, increasing in height day by day. In one case the temperature reached 104.5 F. on the fifth day of excessive heat. A careful physical examination did not reveal any apparent cause for the fever. The children were restless and irritable.

Just before noon on the sixth day, the children were moved to a room in which a large tub of ice and salt was placed. One electric fan blew directly on the ice, and two others were placed on high wall brackets so that they blew air against the ceiling. These last two kept the air of the room constantly moving. The temperature of the room was slightly more than 90 F. the first day and did not go higher than 86 F. on the following days. Thus the peak of the daily heat was eliminated. The day the children were placed in this room not one of them had fever higher than 101.4 F. They all stopped crying and whining almost immediately, and went off into a peaceful sleep. The following days, with the exception of one child who usually had fever following weekly treatments with arsenic and another who had otitis media, the children were practically afebrile. They were not restless nor uncomfortable. The temperature charts of the five children which are printed with a curve showing the official temperature for Nashville during this time leave little doubt that the heat produced fever in these children. The charts of two colored children which are placed below the others show that these infants were unaf-



Temperature of seven children: 1, aged 9 months, white, gastro-intestinal indigestion; 2, aged 13 months, white, gastro-intestinal indigestion; 3, aged 2 months, white, normal; 4, aged 1 year, white, congenital syphilis; 5, aged 7 months, white, otitis media; 6, aged 3 months, colored, normal; 7, aged 1 year, colored, skin tuberculosis. Body temperatures recorded are four hourly rectal temperatures. External temperatures recorded are official temperatures for Nashville at the same hours as the body temperature. The broken vertical line represents the time when the children were placed in the cooler room. The shaded area on the external temperature chart represents the moderation of heat in the cooler room. The arrows on the chart of case 4 represent treatments following which the child usually had a rise in temperature. The horizontal line on the external temperature chart represents the normal mean temperature of Nashville for this period, 79 F. During the period recorded, the average wind velocity from 7 a. m. to 7 p. m. varied from 7 to 5 miles an hour; the average humidity from 7 a. m. to 7 p. m. varied from 47 to 44 per cent saturation.

* From the Department of Pediatrics of the Vanderbilt University Hospital.

1. Meyer, L. F.: Deutsche med. Wchnschr. **2**: 2090 (Nov. 9) 1911.
2. Abt, I. A.: Temperature Variations in Infancy and Early Childhood, Illinois M. J. **36**: 5 (July) 1919.
3. Talbot, F. B.: Body Temperature and Its Regulations, in Abt's Pediatrics **6**: 8, 1925.

fected by the heat. They did not have any fever that could be ascribed to external conditions. They remained playful and contented throughout the hot weather, in spite of the fact that their quarters were even warmer than those of the white children and that they were never placed in a cool room.

That heat strokes with hyperpyrexia and death can be caused in adults by extremely hot still air is well known. Many articles dealing with such "heat strokes" also report lesser degrees of pyrexia and exhaustion caused by similar but less marked or less prolonged conditions. Osler[4] says: "Many observers have called attention to a fever in the tropics which lasts for a few days with no special symptoms other than those of pyrexia and weakness. This may be simply heat exhaustion. It is not uncommon in the Southern states, where it may be mistaken for malaria or mild typhoid fever." In two articles on heat hyperpyrexia, Willcox[5] and Hill[6] discuss clinical types of illness caused by exposure to extreme heat in Mesopotamia. They mention a mild type of heat exhaustion which raises the body temperature to 102 or 103 F. It is not dangerous nor fatal if properly treated. This type of heat exhaustion comes on much more quickly when the air is moist and stagnant, so that loss of heat by convection, radiation and evaporation of sweat becomes impossible. "An Englishman walking in a tropical climate may raise the rectal temperature from 2 to 3 F. and send the pulse rate up to 140 to 160." The same was not found to be true of the dark skinned natives, who stood the heat very well unless they had some disease that produced fever.

Since infants become feverish, irritable and restless when exposed to high external temperatures, it seems very important that sick infants should be spared the effects of great heat. In planning for children in Southern hospitals, a room that can be kept artificially cooled and well ventilated should, if possible, be provided. Children treated at home should be placed in the coolest room available. The air should be kept constantly moving. Even here artificial cooling may be found advisable.

SUMMARY

It has been noted that external heat is usually not mentioned as a cause of obscure fever in children. Five infants whose fever was definitely caused by external heat not only had fever but were restless and irritable. As soon as they were placed in a comparatively cool room with moving air, their temperatures became practically normal and they were quiet and contented. Colored children were not similarly affected by the heat. Similar heat exhaustion with fever has often been noted in adults in the tropics and in the southern United States. An artificially cooled room with good circulation of air should, if possible, be provided in Southern hospitals that care for sick infants.

CONCLUSION

Extreme degrees of external heat, such as occur in the southern part of the United States during periods of the summer months, may be a cause of fever in white infants. This fever can be prevented or eliminated by placing infants in an artificially cooled room which is supplied with moving air.

4. Osler, William; and McCrae, Thomas: The Principles and Practice of Medicine, ed. 9, New York, D. Appleton & Co., 1923, p. 381.
5. Willcox, W. H.: The Nature, Prevention and Treatment of Heat Hyperpyrexia: The Clinical Aspect, Brit. M. J. 1: 392 (March 20) 1920.
6. Hill, Leonard: Physiological Aspect of Heat Stroke, Brit. M. J. 1: 397 (March 20) 1920.

Clinical Notes, Suggestions and New Instruments

A FATAL CASE OF TULAREMIA

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This is the first case of tularemia to be reported in which the infection is known to have been derived in the state of Minnesota.

Mrs. J. H., aged 59, a housewife, of Detroit, Minn., cut her left thumb while dressing a rabbit, Aug. 21, 1926. The onset of symptoms occurred, August 27; the cut developed into an irregular ulcer which did not heal. A mild lymphangitis followed. One or two axillary glands were palpable and slightly tender; they were about the size of a large bean. The epitrochlear gland was slightly enlarged. A papulopustular skin eruption appeared in the second week and extended over the back, chest, abdomen and thighs. There were about two dozen pustules in all.

The clinical picture was much like that of typhoid. There was nausea, vomiting, headache, nosebleed, high fever, light chills, and extreme prostration.

Death occurred, September 9, on the fourteenth day of the patient's illness.

The blood serum was negative for typhoid and the paratyphoids in repeated tests. Examinations of the urine and stools, blood cultures, and smears from the pus were all negative.

Blood collected just after death was forwarded, with a request for examination for tularemia, to the Hygienic Laboratory, U. S. Public Health Service, Washington, D. C. The report stated that the serum agglutinated *Bacterium tularense* in all dilutions from 1:10 to 1:320, but not in higher dilution, thus confirming the diagnosis of tularemia.

A later report stated that the blood clot injected into a guinea-pig caused its death on the sixth day, with the typical lesions of tularemia, and that cultures of *Bacterium tularense* had been taken from the pig.

September 23, a rabbit was found, dying, near the patient's home. The liver, fixed in solution of formaldehyde, was sent to the Hygienic Laboratory, and the report was made that the characteristic small, white nodules of tularemia were visible on the surface of the liver in strong sunlight, and especially with a hand lens. A second rabbit found dead in the neighborhood of the patient's home and sent to Dr. McDaniel of the Minnesota State Board of Health for postmortem study showed the characteristic lesions of tularemia, both grossly and microscopically, and produced the same lesions in the inoculated guinea-pig. Several other rabbits have been found dead in the same region during the last few months.

Scenic Theater Building.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

CONCENTRATED POLLEN EXTRACTS-SWAN-MYERS (See New and Nonofficial Remedies, 1926, p. 28; THE JOURNAL, April 10, 1926, p. 1131).

The following products have been accepted:

Cosmos Concentrated Pollen Extract-Swan-Myers; Dandelion Concentrated Pollen Extract-Swan-Myers; Palmer's Amaranth Concentrated Pollen Extract-Swan-Myers.

Prepared by the method given for concentrated pollen extracts-Swan-Myers (New and Nonofficial Remedies, 1926, p. 28).

HOSPITAL SERVICE IN THE UNITED STATES

SIXTH ANNUAL PRESENTATION OF HOSPITAL DATA BY THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS OF THE AMERICAN MEDICAL ASSOCIATION

I. Nurse Training Schools in the United States **II. Hospitals Utilized in Medical Education**
III. Approved Clinical Laboratories

I. NURSE TRAINING SCHOOLS IN THE UNITED STATES

This year for the first time we present complete information in regard to the number of nurse training schools in the United States; the number of students enrolled; the number of graduates during the last year; the number of graduate students, and the universities granting baccalaureate degrees in nursing. On page 799 will be found a complete list of the nurse training schools, showing the name and location of the hospital and its bed capacity; the entrance requirements of the training school; its enrolment of students; the number of graduates last year, and whether or not the school is accredited by the state. The data presented are the result of a study of all hospitals known to conduct nurse training schools. The information is from reports received from the superintendents of the hospitals having nurse training schools, and are therefore reliable. It is to this hearty cooperation that the success of this survey is due, for which we express our sincere acknowledgments.

NUMBER OF NURSE TRAINING SCHOOLS IN THE UNITED STATES

The number of training schools in each state and the grand total for the United States are shown in table 1. Of the 2,155 training schools which are known to exist, complete reports were received from 2,093, or all but sixty-two.[1] From the latter, repeated requests failed to bring a reply. Of the 2,155 schools reporting,

TABLE 1.—*Nurse Training Schools in Hospitals*

State	Nurse Training School Hospitals: Accredited by State	Not Accredited	Total Schools	Total Beds in Hospitals	Number Schools Sending Data	Undergraduate Student Nurses: 1st Year	2nd Year	3rd Year	Total Students	Graduates 1926	Students in Graduate Courses	State Requirements: Years High School	Nurse Training Months	Hospitals Without Nurse Training Schools: Number	Beds
Alabama	40	12	52	5,274	51	439	311	267	1,017	194	6	No	36	52	3,412
Arizona	3	...	3	301	3	34	23	21	78	25	...	Determined by Board	24	86	3,909
Arkansas	26	2	28	2,117	26	168	163	126	457	102	...	1	30	50	4,988
California	55	...	55	11,535	54	1,326	1,101	850	3,277	823	56	1	28	460	37,333
Colorado	21	3	24	3,153	24	329	278	266	873	207	8	2	36	113	8,547
Connecticut	23	6	29	9,241	28	629	518	422	1,569	380	4	1	24	67	3,863
Delaware	5	1	6	473	6	50	58	40	148	28	...	1	24	10	955
Dist. of Columbia	13	...	13	8,211	13	330	278	281	889	217	20	2	28	26	1,971
Florida	18	6	24	4,059	20	209	135	134	478	93	3	2	36	56	1,837
Georgia	44	12	56	8,315	51	438	390	361	1,189	258	...	2	36	54	2,925
Idaho	9	1	10	602	10	74	50	56	180	34	...	2	36	52	2,200
Illinois	128	19	147	34,863	146	2,370	1,970	1,576	5,916	1,376	69	1	24	277	20,295
Indiana	34	3	37	4,376	36	652	515	394	1,561	296	...	1	36	148	14,506
Iowa	54	10	64	10,747	64	850	647	588	2,085	523	2	1	36	145	5,681
Kansas	57	4	61	3,488	59	483	404	282	1,169	254	7	1	30	98	7,220
Kentucky	29	4	33	2,910	31	301	220	194	715	134	...	1	36	91	8,836
Louisiana	20	1	21	3,568	21	379	292	295	963	194	8	2	36	49	6,903
Maine	31	3	34	3,786	34	262	217	218	697	162	6	2	24	36	2,058
Maryland	28	3	31	7,045	31	509	401	338	1,248	350	9	4	36	66	5,614
Massachusetts	94	18	112	29,103	104	1,782	1,402	1,369	4,553	1,398	20	1	36	214	14,764
Michigan	48	5	53	12,090	51	1,048	798	784	2,630	522	73	2	24	191	17,191
Minnesota	56	11	67	14,890	67	1,435	1,068	900	3,403	738	38	No	36	187	8,223
Mississippi	39	4	43	2,258	43	276	214	192	682	120	2	No	24	27	4,486
Missouri	42	6	48	6,229	45	827	652	579	2,058	381	10	1	24	144	15,891
Montana	17	1	18	1,404	18	184	171	138	493	94	...	2	36	55	3,308
Nebraska	27	1	28	2,936	28	430	314	292	1,036	221	13	2	36	106	6,549
Nevada	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	...	..	..	24	973
New Hampshire	22	1	23	2,651	21	186	162	138	486	129	...	1	24	30	1,445
New Jersey	45	15	60	16,044	59	890	661	510	2,061	533	5	1	24	126	10,287
New Mexico	2	...	2	121	2	12	15	7	34	5	...	No	24	55	3,112
New York	142	19	161	73,854	160	3,338	2,788	2,389	8,515	2,247	61	1	24	504	45,613
North Carolina	.....	...	77	6,144	74	650	428	383	1,461	273	4	1	36	85	6,386
North Dakota	16	2	18	1,558	18	262	193	162	617	110	...	No	36	39	2,806
Ohio	72	13	85	19,436	85	1,599	1,357	1,027	3,983	829	26	1	36	238	12,697
Oklahoma	36	6	42	3,740	39	301	199	149	649	123	3	1	28	88	4,636
Oregon	15	2	17	1,856	17	236	177	151	564	140	3	4	36	87	7,075
Pennsylvania	165	30	195	40,908	193	3,335	2,479	2,188	8,002	1,730	151	1	24	237	21,635
Rhode Island	9	2	11	3,420	11	212	165	148	525	138	5	1	36	29	2,363
South Carolina	30	4	34	4,526	32	310	206	146	662	153	8	1	24	31	965
South Dakota	19	1	20	1,295	20	180	143	144	467	91	2	2	36	50	3,184
Tennessee	34	10	44	3,491	34	456	328	234	1,018	230	9	4	24	68	7,668
Texas	72	9	81	8,879	80	864	759	549	2,172	452	28	2	24	205	14,565
Utah	6	...	6	971	6	166	132	98	396	70	...	4	36	34	1,271
Vermont	12	1	13	1,679	13	158	97	77	332	71	...	1	36	24	1,275
Virginia	43	5	48	4,497	48	509	394	392	1,295	283	2	2	24	64	8,513
Washington	26	2	28	3,276	27	467	396	314	1,177	269	3	4	36	129	10,448
West Virginia	42	3	45	3,152	42	325	239	231	795	153	...	1	36	32	4,925
Wisconsin	38	3	41	4,964	41	731	592	514	1,837	350	...	1	24	197	18,036
Wyoming	7	...	7	513	7	46	39	27	112	19	...	2	36	34	1,671
Totals	1,814	264	2,155	399,940	2,093	31,047	24,539	20,941	76,527	17,522	664	—	—	5,261	404,983

1. Of the 62 schools not reporting, 9 are in unethical hospitals having 269 beds, and 40 others have 50 beds or less each; one is a state hospital for mental diseases with 2,038 beds in which the presence of a nurse training school is doubtful. Altogether, of the hospitals in which these nurse schools are found, the total capacity is 5,066 beds.

195, the largest number, are found in Pennsylvania; followed by New York with 161; Illinois with 147, and Massachusetts with 112. All other states have less than 100 nurse training schools, none whatever being reported for Nevada, two for New Mexico, three for Arizona, six each for Delaware and Utah, and seven for Wyoming. These schools are connected with hospitals having a total of 399,940 beds, the average beds for each hospital being 185.5. This is an interesting contrast with the 5,261 hospitals which do not have nurse training schools. The latter hospitals have a total capacity of 404,983 beds, an average of only 76.0 beds per hospital.

TABLE 2.—*Size of Hospitals Having Nurse Training Schools*

State	5-19 Beds		20-39 Beds		40-99 Beds		100-499 Beds		500-1,000 Beds		Over 1,000 Beds			
	Schools	Students	Schools	Students	Schools	Students	Schools	Students	Schools	Students	Schools	Students	Total Schools	Total Students
Alabama	1	13	16	145	23	386	11	447	..	.....	1	23	52	1,017
Arizona	..	...	...	.....	2	48	1	30	..	.....	..	.....	3	78
Arkansas	..	...	9	107	12	173	7	177	..	.....	..	.....	28	457
California	..	...	1	10	13	352	37	2,451	2	90	2	374	55	3,277
Colorado	..	..	3	36	6	90	15	747	..	.....	..	.....	24	873
Connecticut	2	31	...	.....	10	215	13	826	2	412	2	62	29	1,549
Delaware	..	...	1	9	4	85	1	54	..	.....	..	.....	6	148
District of Columbia	..	...	...	.....	1	31	10	695	..	.....	2	163	13	889
Florida	..	...	7	53	7	89	9	310	..	.....	1	26	24	478
Georgia	6	33	16	145	20	360	13	613	..	.....	1	38	56	1,189
Idaho	..	...	3	26	5	82	2	72	..	.....	..	.....	10	180
Illinois	3	9	21	248	55	1,397	57	3,618	3	385	8	259	147	5,916
Indiana	..	..	6	51	12	310	18	1,090	1	110	..	.....	37	1,561
Iowa	3	17	10	116	26	540	20	1,082	1	265	4	65	64	2,085
Kansas	4	19	22	169	28	580	7	401	..	.....	..	.....	61	1,169
Kentucky	3	11	6	49	12	207	12	478	..	.....	..	.....	32	745
Louisiana	..	...	2	19	9	238	9	582	..	.....	1	127	21	966
Maine	3	21	10	90	13	308	6	276	1	21	1	11	34	697
Maryland	..	...	2	23	10	187	16	798	2	224	1	16	31	1,248
Massachusetts	4	51	9	73	38	1,032	48	3,020	2	241	10	136	111	4,553
Michigan	..	...	5	49	18	306	24	1,496	2	401	4	318	53	2,630
Minnesota	2	7	12	156	26	518	21	2,005	3	668	3	109	67	3,463
Mississippi	2	7	16	144	18	360	7	171	..	.....	..	.....	43	682
Missouri	1	1	4	75	19	544	23	1,354	1	84	..	.....	48	2,058
Montana	..	...	4	41	7	159	7	293	..	.....	..	.....	18	493
Nebraska	..	...	4	38	11	298	13	700	..	.....	..	.....	28	1,036
New Hampshire	..	...	6	76	15	299	1	50	..	.....	1	61	23	486
New Jersey	..	...	3	30	20	342	32	1,481	2	177	3	28	60	2,061
New Mexico	..	...	1	18	1	16	...	.....	..	.....	..	.....	2	34
New York	..	...	11	91	44	1,252	85	5,645	3	592	18	935	161	8,515
North Carolina	3	15	29	277	32	681	12	464	..	.....	1	24	77	1,461
North Dakota	..	...	2	15	10	232	6	370	..	.....	..	.....	18	617
Ohio	1	3	10	117	31	890	37	2,721	1	93	5	159	85	3,983
Oklahoma	1	3	17	153	20	329	4	164	..	.....	..	.....	42	649
Oregon	..	...	1	5	11	157	5	402	..	.....	..	.....	17	564
Pennsylvania	2	11	12	78	82	1,707	83	4,539	9	1,115	7	522	195	8,002
Rhode Island	..	...	1	7	2	12	6	267	1	218	1	21	11	525
South Carolina	1	0	12	95	15	286	5	245	..	.....	1	36	34	662
South Dakota	..	...	3	40	15	367	2	60	..	.....	..	.....	20	477
Tennessee	4	7	9	80	16	273	13	658	..	.....	..	.....	42	1,018
Texas	1	4	26	275	34	751	19	1,123	..	.....	1	19	81	2,172
Utah	..	...	...	.....	1	23	5	373	..	.....	..	.....	6	396
Vermont	..	...	2	32	8	163	2	120	1	17	..	.....	13	332
Virginia	..	...	4	42	32	767	12	486	..	.....	..	.....	48	1,295
Washington	..	...	1	0	12	270	15	907	..	.....	..	.....	28	1,177
West Virginia	1	7	4	22	31	475	9	291	..	.....	..	.....	45	795
Wisconsin	..	...	2	24	16	446	23	1,337	..	.....	..	.....	41	1,837
Wyoming	..	...	...	.....	6	93	1	19	..	.....	..	.....	7	112
Totals	48	273	345	3,349	859	18,806	784	45,511	37	5,053	79	3,535	2,152	76,527

ACCREDITED SCHOOLS

Of the 2,155 nurse training schools, 1,814 are listed as approved by the state boards of nursing examiners and 264 are reported as not accredited, while seventy-seven are in North Carolina, which has not yet completed its survey of such schools. South Carolina reports that its board accepts "all graduates from training schools connected with general hospitals where at least two years of continuous resident training with a systematic course of instruction is given." Of the thirty-four schools in South Carolina, thirty reported a two years' resident course and are tabulated as accredited.

STUDENTS ENROLLED IN NURSE TRAINING SCHOOLS

The total enrolment of students in the 2,093 training schools is 76,527, subdivided in classes as follows: first year, 31,047; second year, 24,539; and third year, 20,941. The largest number is enrolled in the first year, with fewer in the second and still fewer in the third, as the result, probably, of the natural tendency to drop out before the course is completed. It may be also that, with the increase in the number of hospitals and number of nurse training schools, there was also naturally an increase in the first and second year classes.

Of the total students enrolled, the largest number is 8,515 in New York; followed by Pennsylvania with 8,002; Illinois with 5,916; Massachusetts with 4,553; Ohio with 3,983; California with 3,277, and Michigan with 2,630.

GRADUATES DURING THE LAST YEAR

The number of graduates reported during the last year is 17,522. The largest number was 2,247 in the training schools of New York; followed by Pennsylvania with 1,730; Massachusetts with 1,398, and Illinois with 1,376. These are the only states having more than 1,000 graduates.

SIZE OF HOSPITALS HAVING NURSE TRAINING SCHOOLS

The size of hospitals in which nurse training schools are found is set forth in table 2. It is interesting to note that in hospitals having from five to nineteen beds there are forty-eight schools in which 273 student nurses are enrolled; in hospitals having from twenty to thirty-nine beds there are 345 schools with 3,349 students enrolled. In the hospitals of from forty to ninety-nine beds is found the largest number of schools, there being 859 schools, which, however, enrolled only

18,806 students. It is in the hospitals of from 100 to 499 beds, though they have only 784 schools, that the largest enrolment, 45,511 students, is found. In hospitals having 500 beds and over there are only 116 nurse training schools, with 8,588 students enrolled. The largest number of schools and the largest enrolments come in hospitals ranging from 40 to 500 beds.

TYPES OF HOSPITALS HAVING NURSE TRAINING SCHOOLS

Of the 2,093 nurse training schools, as shown in table 3, 1,925, or 92 per cent, are in general hospitals, and this group of schools has 72,725, or 95 per cent, of all nurse students enrolled. This group also graduates 16,492, or 94 per cent, of all nurses graduating in 1926. Hospitals for nervous and mental diseases had ninety-one nurse training schools with 2,070 students enrolled last year, of whom 451 graduated; hospitals for tuberculosis patients had twenty-five schools with 666 students and 130 graduates, and other types of hospitals, such as orthopedic, pediatric, and skin and cancer hospitals, had fifty-two training schools with 1,066 students and forty-nine graduates last year.

TABLE 3.—*Types of Hospitals Conducting Nurse Training Schools*

State	General			Nervous and Mental			Tuberculosis			All Other Hospitals *			Totals		
	No. Tr. Schools	Total Students	Graduates Last Year	No. Tr. Schools	Total Students	Graduates Last Year	No. Tr. Schools	Total Students	Graduates Last Year	No. Tr. Schools	Total Students	Graduates Last Year	No. Tr. Schools	Total Students	Graduates Last Year
Alabama	50	991	191	1	26	3	..	...	...	..	.....	...	51	1,017	194
Arizona	3	78	25	..	.....	...	..	...	...	..	.....	...	3	78	25
Arkansas	26	457	102	..	.....	...	..	...	...	..	.....	...	26	457	102
California	53	3,220	808	..	.....	...	..	...	...	1	57	15	54	3 277	823
Colorado	22	798	188	..	.....	...	1	20	5	1	55	14	24	873	207
Connecticut	23	1,465	341	3	70	15	..	...	...	2	34	24	28	1,569	380
Delaware	6	148	28	..	.....	...	..	...	...	..	.....	...	6	148	28
District of Columbia	11	845	205	1	9	4	..	...	...	1	35	8	13	889	217
Florida	19	452	85	1	26	8	..	...	...	..	.....	...	29	478	93
Georgia	48	1,132	242	2	47	11	1	10	5	..	.....	...	51	1,189	258
Idaho	10	180	34	..	.....	...	..	...	...	..	.....	...	10	180	34
Illinois	132	5,651	1,327	8	143	15	2	89	15	4	33	19	146	5,916	1,376
Indiana	35	1,540	292	1	21	4	..	...	...	..	.....	...	36	1,561	296
Iowa	58	1,999	504	5	73	11	..	...	...	1	13	8	64	2,085	523
Kansas	58	1,166	251	1	3	3	..	...	...	..	.....	...	59	1,169	254
Kentucky	31	715	134	..	.....	...	..	...	...	..	.....	...	31	715	134
Louisiana	21	906	194	..	.....	...	..	...	...	..	.....	...	21	906	194
Maine	30	691	149	2	32	4	..	...	...	2	34	9	34	697	162
Maryland	26	1,182	320	3	28	19	2	38	11	..	.....	...	31	1 248	350
Massachusetts	85	4,118	1,229	11	216	60	3	61	29	5	158	98	104	4 553	1,598
Michigan	47	2,530	504	3	79	11	..	...	...	1	21	7	51	2,630	522
Minnesota	58	3,239	688	4	125	26	2	16	5	3	13	19	67	3,403	738
Mississippi	43	682	120	..	.....	...	..	...	...	..	.....	...	43	682	120
Missouri	40	1,769	355	..	.....	...	1	210	...	4	79	26	45	2,058	381
Montana	18	493	94	..	.....	...	..	...	...	..	.....	...	18	493	94
Nebraska	27	1,029	213	..	.....	...	..	...	...	1	16	5	28	1,036	221
Nevada	.....	.....	.....	..	.....	...	..	...	...	..	.....	...	.....	.....	.....
New Hampshire	20	425	129	1	61	...	..	...	...	..	.....	...	21	486	129
New Jersey	52	1,994	496	3	28	6	..	...	...	4	29	31	59	2,061	533
New Mexico	2	34	5	..	.....	...	..	...	...	..	.....	...	2	34	5
New York	139	7,827	2,012	15	480	115	1	38	9	5	170	61	160	8,515	2,247
North Carolina	70	1,370	263	3	73	6	1	18	4	..	.....	...	74	1,461	273
North Dakota	17	613	110	..	.....	...	1	4	...	..	.....	...	18	617	110
Ohio	79	3,871	772	4	57	19	..	...	...	2	55	38	85	3,983	829
Oklahoma	37	630	116	1	16	7	..	...	...	1	3	...	39	649	123
Oregon	17	564	140	..	.....	...	..	...	...	..	.....	...	17	564	140
Pennsylvania	163	7,590	1,563	11	315	72	4	62	28	12	226	67	193	8,002	1,730
Rhode Island	9	477	123	2	48	15	..	...	...	..	.....	...	11	525	138
South Carolina	31	626	144	1	36	9	..	...	...	..	.....	...	32	662	153
South Dakota	20	467	91	..	.....	...	..	...	...	..	.....	...	20	467	91
Tennessee	32	993	228	1	8	...	1	17	2	..	.....	...	34	1,018	230
Texas	77	2,118	443	1	19	4	1	27	5	1	8	...	80	2,172	452
Utah	6	386	70	..	.....	...	..	...	...	..	.....	...	6	386	70
Vermont	12	315	68	1	17	3	..	...	...	..	.....	...	13	332	71
Virginia	43	1,225	261	1	14	1	4	56	21	..	.....	...	48	1,295	283
Washington	27	1,177	239	..	.....	...	..	...	...	..	.....	...	27	1,177	239
West Virginia	41	788	153	..	.....	...	..	...	...	1	7	...	42	795	153
Wisconsin	41	1,837	350	..	.....	...	..	...	...	..	.....	...	41	1,837	350
Wyoming	7	112	19	..	.....	...	..	...	...	..	.....	...	7	112	19
Totals	1,925	72,725	16,492	91	2,070	451	25	666	130	52	1,066	449	2,093	76,527	17,522

* This group includes the following types of hospitals: maternity 24; children's 17; convalescent and rest 3; eye, ear, nose and throat 3; orthopedic 3; chronic diseases 1 and dental 1.

SIZE OF ENROLMENTS IN NURSE TRAINING SCHOOLS

The size of nurse training schools from a standpoint of student enrolments is shown in table 4. It is noted that 287 schools had enrolments of 9 students or less; 529 schools had between 10 and 19; 392 schools had between 20 and 29 students; 268 had from 30 to 39 students; 155 schools had between 40 and 49 students; 226 schools had from 50 to 74 students enrolled, and 226 schools had 75 students or over. The largest number of schools were those having classes of from 10 to 19 students. The average enrolment for all schools was 36.6 students.

The total numbers of nurse schools, students and graduates, according to the size of the school, are given in table 5.

TRAINING SCHOOLS IN UNETHICAL AND IRREGULAR HOSPITALS

The figures given in the previous tables include the number of students and graduates in all hospitals from which reports were received. The institutions named in the list beginning on page 799, however, purposely exclude both names and data regarding thirty-eight nurse training schools found to be in hospitals which, for various reasons, are considered unethical—that is, they are in hospitals regarding which evidence obtained shows that some are conducted in a seriously unethical manner; others have immoral, unscrupulous or ignorant practitioners on their staffs or permit them to practice in the hospitals, and others for various reasons are considered as unsafe places for the care of sick and injured people; hence they are not named in the list.

From the standpoint of nurse training, it is deplorable that, as shown in table 6, thirty-eight training schools are found in such hospitals! Reports received from twenty-nine of these schools show an enrolment of 426 students last year and 120 graduates. Of these thirty-eight training schools in unethical hospitals, also, it is encouraging to note that nineteen are reported as not accredited by the states in which they are located, although eighteen are still found on the accredited lists. The location of these eighteen schools is shown in the table. The one remaining school in such a hospital is in North Carolina, where the accredited list has not as yet been completed.

TABLE 4.—*Size of Nurse Training Schools*

State	Number of Nurse Training Schools Having							
	1-9 Students	10-19 Students	20-29 Students	30-39 Students	40-49 Students	50-74 Students	75-99 Students	100 + Students
Alabama	15	17	6	8	2	3	...	...
Arizona	...	1	...	2	...	...	...	...
Arkansas	7	10	7	1	...	1	...	...
California	...	5	7	6	7	14	8	7
Colorado	2	5	4	4	2	5	2	...
Connecticut	2	2	5	6	3	4	2	4
Delaware	1	2	2	...	...	1	...	...
Dist. of Columbia	1	...	...	2	...	5	4	1
Florida	5	5	5	2	1	2	...	...
Georgia	12	18	10	2	2	6	1	...
Idaho	3	3	1	3	...	...	...	...
Illinois	23	22	28	23	17	15	8	10
Indiana	5	4	7	7	5	3	1	4
Iowa	11	14	18	6	4	7	1	3
Kansas	22	16	9	5	3	1	3	...
Kentucky	8	8	6	3	4	1	1	...
Louisiana	1	3	4	6	2	2	...	3
Maine	10	11	5	3	2	3	...	...
Maryland	3	10	5	3	...	7	1	2
Massachusetts	10	17	22	14	11	13	7	10
Michigan	4	12	9	6	5	4	4	7
Minnesota	10	19	9	6	3	3	8	9
Mississippi	13	17	8	4	...	1	...	...
Missouri	4	10	8	6	1	8	3	5
Montana	1	8	2	1	4	2	...	...
Nebraska	2	8	3	6	2	4	2	1
New Hampshire	2	9	4	4	...	2	...	...
New Jersey	6	14	9	9	4	13	2	2
New Mexico	...	2	...	...	...	...	...	...
New York	9	15	26	28	21	30	14	17
North Carolina	11	33	16	7	5	2	...	...
North Dakota	2	7	1	2	2	1	2	1
Ohio	6	16	18	10	7	9	9	10
Oklahoma	10	18	8	1	...	2	...	...
Oregon	4	7	1	1	1	...	1	2
Pennsylvania	15	45	44	26	14	23	14	12
Rhode Island	3	...	2	2	1	2	...	1
South Carolina	7	11	7	4	...	3	...	...
South Dakota	2	5	7	4	2	...	...	...
Tennessee	9	8	4	3	4	4	1	1
Texas	9	37	12	8	4	4	4	2
Utah	...	...	1	1	1	1	1	1
Vermont	1	6	2	2	...	2	...	...
Virginia	2	16	14	10	3	2	...	1
Washington	1	5	6	5	2	1	4	3
West Virginia	9	18	9	3	2	1	...	...
Wisconsin	3	6	9	3	2	9	8	1
Wyoming	1	4	2	...	...	...	...	...
Total schools	287	529	392	268	155	226	116	120

TABLE 5.—*Nurse Schools, Students and Graduates According to Size of School*

Nurse Training Schools Having:	Schools		Students		Graduates 1926		Average	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Students	Graduates
9 students or less	287	13.8	1,811	2.4	519	3.0	6.3	1.8
10 to 19 students	529	25.1	7,490	9.8	1,759	10.0	14.1	3.3
20 to 29 students	392	18.7	9,371	12.3	2,241	12.8	23.9	5.5
30 to 39 students	268	12.8	9,277	12.1	2,049	11.7	34.6	7.6
40 to 49 students	155	7.4	6,815	8.9	1,524	8.7	43.9	9.8
50 to 74 students	226	11.0	13,701	17.8	3,099	17.7	60.6	13.7
75 to 99 students	116	5.5	10,098	13.2	2,111	12.1	87.0	18.2
100 students or over	120	5.7	17,964	23.5	4,220	24.0	149.7	35.1
Totals	2,093	100	76,527	100	17,522	100	36.5	8.4

REQUIREMENTS OF NURSE TRAINING SCHOOLS

The requirements of nurse training schools in regard to age and to preliminary education are set forth in table 7. This shows that seventy schools admit young women of an age less than 18 years; 1,841 require 18 years as the minimum age; 139 require 19 years as

TABLE 6.—*Nurse Training Schools in Unethical and Irregular Hospitals*

State	Total Schools	Reporting	Not Reporting	Accredited by State	Not Accredited	Total Students	Graduates, 1926
Arkansas	1	1	..	1	..	16	...
California	2	2	..	1	1	36	8
Colorado	1	1	..	..	1	6	2
Georgia	1	..	1	..	1	...	...
Illinois	8	7	1	3	5	89	32
Indiana	2	2	..	1	1	26	5
Iowa	3	3	..	2	1	38	13
Kansas	3	3	..	3	..	55	11
Kentucky	1	..	1	..	1	...	...
Massachusetts	3	2	1	1	2	35	13
Missouri	3	2	1	2	1	35	...
Nebraska	1	1	..	..	1	15	5
North Carolina	1	1	..	..	..	30	4
Oklahoma	1	1	..	..	1	15	3
Oregon	1	1	..	1	..	9	3
Pennsylvania	1	..	1	..	1	...	...
South Carolina	1	..	1	..	1	...	...
Tennessee	1	..	1	..	1	...	...
Texas	1	..	1	1	..	...	...
Washington	1	1	..	1	..	15	...
Wyoming	1	1	..	1	..	6	1
Totals	38	29	9	18	19	426	120

TABLE 7.—*Requirements of Nurse Training Schools*

State	Age Limit Schools Requiring:				Preliminary Education Schools Requiring:				
					High School				
	Less Than 18 Yrs.	18 Yrs.	19 Yrs.	Over 19 Yrs.	4 Yrs.	3 Yrs.	2 Yrs.	1 Yr.	Less	No Requirements
Alabama	2	45	2	2	17	3	20	5	6	..
Arizona	..	3	...	..	...	1	2	...	..	..
Arkansas	..	23	3	..	10	..	11	5	..	..
California	..	50	4	..	28	..	11	14	1	..
Colorado	..	24	...	..	6	..	17	...	1	..
Connecticut	3	25	...	..	3*	..	...	22	3	..
Delaware	1	5	...	..	1	..	1	4	..	..
Dis. of Col.	1	9	3	..	5	1	7	...	..	..
Florida	..	19	1	..	2	..	17	1	..	..
Georgia	..	47	1	3	21	4	22	2	1	1
Idaho	1	9	...	..	1	1	8	...	..	..
Illinois	3	107	35	1	39	2	28	71	4	2
Indiana	..	36	...	..	12	..	7	17	..	..
Iowa	3	55	6	..	20	..	34	3	5	2
Kansas	1	54	2	2	22	..	3	33	1	..
Kentucky	1	28	1	1	5	..	5	19	2	..
Louisiana	..	21	...	..	8	..	11	1	1	..
Maine	..	18	14	2	11	..	23	...	..	..
Maryland	..	22	4	5	24	..	1	3	3	..
Massachusetts	..	98	4	2	18	2	28	53	1	2
Michigan	..	48	3	..	12	..	34	1	4	..
Minnesota	..	59	7	1	29	1	9	23	4	1
Mississippi	3	36	3	1	24	1	10	5	3	..
Montana	..	18	...	..	5	..	13	...	..	..
Nebraska	..	26	1	1	12	..	16	...	..	..
New Hampshire	..	14	7	..	4	..	1	16	..	..
New Jersey	4	53	1	1	2	..	2	48	7	..
New Mexico	..	2	...	..	...	..	...	2	..	..
New York	29	123	4	4	17	1	20	109	12	1
North Carolina	..	69	2	3	33	1	23	16	..	1
North Dakota	..	18	...	..	10	..	6	2	..	..
Ohio	1	82	2	..	34	..	11	35	5	..
Oklahoma	..	34	4	1	15	..	20	2	1	1
Oregon	..	11	6	..	17	..	...	...	..	..
Pennsylvania	4	183	4	2	33	..	58	93	9	..
Rhode Island	..	10	1	..	1	..	4	5	..	1
South Carolina	1	29	...	2	13	..	13	5	..	1
South Dakota	1	19	...	..	7	..	12	...	1	..
Tennessee	1	31	1	1	11	1	16	4	2	..
Texas	2	77	...	1	26	2	24	24	4	..
Utah	..	6	...	..	4	..	2	...	..	..
Vermont	1	11	...	1	2	..	2	8	..	1
Virginia	..	44	1	3	15	1	32	...	..	..
Washington	..	24	3	..	13	..	13	1	..	..
West Virginia	3	37	2	..	7	..	5	30	..	..
Wisconsin	4	34	3	..	17	1	9	13	1	..
Wyoming	..	7	...	..	3	1	3	...	..	..
Totals	70	1,841	139	43	636	26	622	711	84	14

* Yale University School of Nursing requires two years of college work.

the minimum, and forty-three require an age in advance of 19 years.

There are 636 nurse training schools which require four years of high school education as a minimum education for admission, including twenty-five which require also two or more years of college work. Twenty-six schools require three or more years of high school work; 622 schools require two or more years, and 711 require one or more years of high school work. In eighty-four schools only a common school education is required, while for fourteen schools no requirement of preliminary education has been fixed.

The state requirements in regard to entrance requirements of nurse training schools are set forth in table 1. It is shown that the four year high school course is the minimum requirement in five states, while fourteen states require two years of high school work as the minimum; twenty-three states require one or more years, and in six states no requirement is specified. Nevada has no nurse training schools and evidently no standard has been established.

UNIVERSITY NURSE TRAINING SCHOOLS

Of the 2,155 nurse training schools shown in table 1, twenty-five are conducted by universities. The courses of these extend over five years and lead to degrees of either bachelor of arts (A.B.) or bachelor of science (B.S.) in nursing. These schools are named in table 8. The hospitals with which the schools are affiliated are also named, so that, if desired, the bed capacity and other data can be obtained by referring to the list published on page 799. The statistics regarding these hospitals are included also in table 1.

These twenty-five schools have an enrolment of 368 students, of whom fifty-two were graduated and granted degrees during 1926. The universities of Georgia, Pittsburgh, St. Louis and Wyoming announce their intention of establishing, in the early future, nurse training schools with five year courses leading to degrees in nursing. This will increase the total to twenty-nine. A year or two ago Howard University began a five year course for colored nurses, but it has since been discontinued because only one student enrolled for it. Yale University requires two years of college work for admission to its nurse training school, whether or not the nurses are candidates for the baccalaureate degree.

TABLE 8.—*University Nurse Training Schools*

University Connection	City	Degree	No. Students Enrolled	Degrees Granted, 1926	Hospital Affiliations
Stanford University..	San Francisco	A.B.	3	1	Stanford, Lane
Univ. of California..	San Francisco	B.S.	12	16	University, Children's, Hahnemann
Univ. of Colorado...	Denver.....	B.S.	5	3	Colo. Gen., Colo. Psychopathic
Yale University	New Haven...	B.S.	42	2	New Haven; Butler, (Providence, R. I.)
Illinois Wesleyan University	Bloomington.	B.S.	1	New	Brokaw
Ill. Woman's Coll...	Jacksonville..	B.S.	1	New	Passavant
Indiana University...	Indianapolis..	A.B. or B.S.	4	3	Long, Riley
State Univ. of Iowa	Iowa City.....	B.S.	10	3	University
Univ. of Maryland..	Baltimore.....	B.S.	1	New	University
Simmons College [1]...	Boston.....	B.S.	38	5	Mass. Gen., Peter Bent Brigham, Children's
Univ. of Michigan...	Ann Arbor....	B.S.	8	1	University
Battle Creek College	Battle Creek..	B.S.	17	5	Battle Creek Sanit.
Univ. of Minnesota..	Minneapolis...	B.S.	68	5	University, Minnea. Gen., Miller, N. Pac. B.A.
Univ. of Missouri....	Columbia.....	A.B.	7	2	Univ. (Columbus), Research, Child'n's (K. C.)
Washington Univ....	St. Louis.....	B.S.	9	1	Barnes, Children's
Univ. of Nebraska....	Omaha.....	B.S.	24	2	University
Univ. of Rochester...	Rochester.....	B.S.	3	New	Strong, Municipal
West'n Reserve Univ.	Cleveland.....	B.S.	45	3	Babies', Maternity, Lakeside
Univ. of Cincinnati..	Cincinnati....	B.S.	33	0	Cincinnati General
Ohio State University	Columbus.....	B.S.	10	0	University
Temple University [2]..	Philadelphia..	B.S.	1	0	Samaritan, Phila. Gen., Contag.
Vanderbilt Univ.....	Nashville.....	B.S.	..	New	University
University of Texas.	Galveston.....	B.S.	0	0	Sealy
Univ. of Wisconsin..	Madison.....	B.S.	26	New	Wisconsin General
Marquette University	Milwaukee....	B.S.	0	New	Marquette Univ.
Total Universities, 25			368	52	Hospitals, 44

1. School of Public Health Nursing.
2. Four-year course only.

TABLE 9.—*Hospitals Training Men Nurses*

Hospital	City	Students Enrolled
Glendale Sanitarium and Hospital....	Glendale, Calif.....	8
Loma Linda Sanitarium and Hospital	Loma Linda, Calif.....	2
Los Angeles General Hospital.....	Los Angeles, Calif.....	6
Mary's Help Hospital.....	San Francisco, Calif...	1
St. Mary's Hospital.....	San Francisco, Calif...	0
St. Helena Sanitarium and Hospital...	Sanitarium, Calif.....	7
Boulder-Colorado Sanitarium.....	Boulder, Colo.....	3
Providence Hospital	Washington, D. C.....	6
St. Elizabeth's Hospital.....	Washington, D. C.....	1
Washington Sanitarium and Hospital.	Washington, D. C.....	5
Alexian Brothers Hospital *.....	Chicago, Ill.....	40
McLean Hospital	Belmont, Mass.....	28
Carney Hospital	Boston, Mass.....	4
Worcester City Hospital.....	Worcester, Mass.....	12
St. Joseph's Mercy Hospital.....	Detroit, Mich.....	0
St. Joseph's Hospital.....	St. Joseph, Mo.....	1
Green Gables, Dr. Benjamin F. Bailey Sanatorium	Lincoln, Neb.....	8
Binghamton State Hospital.....	Binghamton, N. Y.....	2
Buffalo State Hospital.....	Buffalo, N. Y.....	0
Middletown State Homeopathic Hosp.	Middletown, N. Y.....	9
Bellevue and Allied Hospitals.....	New York City.....	23
St. Lawrence State Hospital.....	Ogdensburg, N. Y.....	5
St. Joseph's Hospital.....	Philadelphia, Pa.....	8
Mercy Hospital	Pittsburgh, Pa.....	5
St. John's General Hospital.....	Pittsburgh, Pa.....	1
Butler Hospital	Providence, R. I.....	10
St. Paul's Sanitarium	Dallas, Tex.....	3
St. Joseph's Infirmary	Houston, Tex.....	4
Mary Fletcher Hospital, Inc.....	Burlington, Vt.....	0
Total hospitals, 29; total students, 202.		

* Male nurses only.

HOSPITALS TRAINING MEN NURSES

Among the 2,155 nurse training schools shown in table 1 there are twenty-nine which provide also for the training of men nurses. Of these, twenty-eight are coeducational, while the one at the Alexian Brothers Hospital, Chicago, is for men nurses only. These training schools are shown in table 9. Altogether 202 men nurses were enrolled in these hospitals last year, of whom approximately forty graduated.

NURSE TRAINING SCHOOLS OFFERING GRADUATE COURSES

Of the 2,155 nurse training schools, there are 167 which, in addition to undergraduate courses, also provide courses for graduates. There are also fourteen schools which give graduate instruction, but have affiliating courses only for undergraduates, and eight schools which give graduate instruction only. These 189 schools are listed in table 10. The special departments are also shown in which graduate courses are offered. From this table nurses desiring to secure courses in special fields can know where to find them. Of the 189 schools which offer graduate courses, thirty-nine had no graduate students enrolled during 1926.

The largest number of graduate courses offered in any specialty is fifty-five in surgery, followed by fifty-four in obstetrics; thirty-four in general medicine; twenty-seven each in pediatrics and anesthesia; twenty-

TABLE 10.—*Nurse Training Schools Offering Graduate Courses*

Hospital Connection	City	Number Students	Specialties of Study: Medical: General Medicine	Medical: Pediatrics	Medical: Contagious Diseases	Medical: Tuberculosis	Medical: Nervous and Mental	Surgical: General Surgery	Surgical: Obstetrics	Surgical: Orthopedics	Surgical: Operating Room Technic	Surgical: Anesthesia	Others: Laboratory	Others: X-Ray	Others: Dietetics	Others: Administration	Others: Miscellaneous
ALABAMA																	
Walker County Hospital	Jasper	2	....	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....
City Hospital	Mobile	4	....	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....
CALIFORNIA																	
General Hospital of Fresno County	Fresno	0	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Seaside Hospital	Long Beach	4	....	....	....	....	....	....	Yes	....	Yes	....	....	....	....	....	....
Barlow Sanatorium (a)	Los Angeles	0	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....
Los Angeles General Hospital	Los Angeles	2	....	Yes	Yes	Yes	Yes	Yes	Yes	....	....	....	....	....	....	....	....
Methodist Hospital of Southern California	Los Angeles	8	....	....	....	....	....	Yes	Yes	....	....	....	....	....	....	Yes	....
Fabiola Hospital Association	Oakland	0	....	....	....	....	....	....	Yes	....	Yes	....	....	....	....	....	....
Mercy Hospital	San Diego	0	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
San Diego County General Hospital	San Diego	4	....	....	....	....	....	....	Yes	....	Yes	....	....	....	....	Yes	....
French Hospital	San Francisco	3	....	....	....	....	....	....	....	....	Yes	....	....	....	....	....	....
Hospital for Children	San Francisco	2	....	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Stanford School of Nursing	San Francisco	2	....	....	....	....	....	....	Yes	....	Yes	....	....	....	....	Yes	Yes (1)
Mary's Help Hospital	San Francisco	8	....	Yes	....	....	....	Yes	Yes	....	....	....	....	....	....	Yes	....
Mt. Zion Hospital, Inc	San Francisco	2	....	....	....	....	....	....	Yes	....	Yes	....	....	....	....	Yes	Yes (2)
San Francisco Hospital	San Francisco	11	....	Yes	Yes	....	....	Yes	Yes	....	....	....	....	....	....	....	....
St. Mary's Hospital	San Francisco	0	....	....	....	....	....	Yes	Yes	....	....	....	....	....	....	....	....
																	(3)
																	(4)
University of California Hospital	San Francisco	2	Yes	....	....	....	....	Yes	....	....	Yes	....	....	....	....	Yes	Yes (5)
																	(6)
Alameda County Hospital & Infirmary (b)	San Leandro	0	Yes	....	Yes	....	....	Yes	....	....	....	....	....	....	....	....	....
COLORADO																	
Colorado General Hospital	Denver	8	....	....	....	....	Yes	Yes	....	....	....	....	....	....	....	....	....
Denver General Hospital	Denver	0	....	....	....	....	....	Yes	....	....	....	....	Yes	....	....	....	....
CONNECTICUT																	
Hartford Hospital	Hartford	4	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....	....
Hartford Isolation Hospital (a)	Hartford	2	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....	....
St. Francis Hospital	Hartford	0	....	....	....	....	....	....	Yes	....	....	Yes	....	....	....	....	Yes (7)
New Britain General Hospital	New Britain	17	....	....	....	....	....	....	....	....	....	....	....	....	....	Yes	Yes (8)
Yale University School of Nursing, New Haven Hospital	New Haven	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	Yes	Yes (1)
DISTRICT OF COLUMBIA																	
Providence Hospital	Washington	.....	....	....	....	....	....	....	....	....	....	Yes	....	Yes	....	....	....
St. Elizabeth's Hospital	Washington	14	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....
Walter Reed General Hospital	Washington	6	....	....	....	....	....	....	....	....	....	Yes	Yes	....	....	....	....
FLORIDA																	
St. Luke's Hospital Association	Jacksonville	2	Yes	....	Yes	....	....	Yes	Yes	....	....	....	....	....	....	....	....
Bayside Hospital, Inc	Tampa	1	....	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....
GEORGIA																	
Wesley Memorial Hospital	Emory	.....	....	....	....	....	....	....	Yes	....	Yes	....	....	....	....	....	....
Georgia State Sanitarium	Milledgeville	0	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....
ILLINOIS																	
Alexian Brothers Hospital	Chicago	4	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....	....
Auburn Park Hospital	Chicago	2	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Chicago Lying-in Hospital (a)	Chicago	63	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Chicago Municipal Tuberculosis Sanit. (a)	Chicago	8	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....
Columbus Hospital	Chicago	0	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Illinois Training School for Nurses, Cook County Hospital	Chicago	23	Yes	Yes	....	....	....	Yes	Yes	....	Yes	....	....	....	Yes	Yes	Yes (5)
Frances E. Willard Hospital	Chicago	2	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....	....
Michael Reese Hospital	Chicago	7	Yes	Yes	....	....	....	....	....	....	Yes	....	....	....	....	....	....
Post Graduate Hospital and Medical School	Chicago	13	....	....	....	....	....	....	....	....	....	Yes	Yes	Yes	....	....	....
Ravenswood Hospital	Chicago	2	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....	....
St. Elizabeth's Hospital	Chicago	2	....	....	....	....	....	Yes	....	....	....	Yes	....	Yes	....	....	....
St. Luke's Hospital	Chicago	0	....	....	....	....	....	....	....	....	....	Yes	Yes	Yes	....	....	....
Washington Park Hospital	Chicago	1	....	....	....	....	....	....	....	....	....	....	Yes	Yes	....	....	....
Evanston Hospital	Evanston	0	....	....	Yes	....	....	....	Yes	....	Yes	....	....	....	....	....	....
St. Francis Hospital	Evanston	1	....	....	....	....	....	....	....	....	....	....	....	Yes	....	....	....
St. Francis' Hospital (c)	Macomb	5	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
St. John's Hospital	Springfield	8	....	....	....	....	....	....	....	....	....	....	Yes	Yes	....	....	Yes (7)
INDIANA																	
Indiana University Training School for Nurses (d)	Indianapolis	0	....	Yes	....	....	....	....	....	....	....	....	....	....	....	....	....
St. Vincent's Hospital	Indianapolis	0	....	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....
KANSAS																	
Bonner Springs Sanitarium	Bonner Springs	2	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....
St. Francis Hospital	Wichita	5	....	Yes	....	....	....	....	Yes	....	....	....	Yes	Yes	....	....	....
LOUISIANA																	
Charity Hospital of Louisiana	New Orleans	6	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....	....
Southern Baptist Hospital	New Orleans	2	....	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....
MAINE																	
Dr. Leighton's Private Maternity Hospital	Portland	6	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	Yes (3)
MARYLAND																	
Johns Hopkins Hospital	Baltimore	6	....	Yes	....	....	Yes	Yes	....	....	....	....	....	....	....	....	....
Union Memorial Hospital	Baltimore	1	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
University of Maryland Hospital	Baltimore	0	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Hospital for Consumptives of Maryland	Towson	2	....	....	....	Yes	....	....	....	....	....	....	Yes	Yes	....	....	....
Sheppard and Enoch Pratt Hospital	Towson	0	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....
MASSACHUSETTS																	
McLean Hospital	Belmont	3	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Boston Floating Hospital (e)	Boston	40	....	Yes	....	....	....	....	....	....	....	....	....	....	....	....	....

TABLE 10.—*Nurse Training Schools Offering Graduate Courses—Continued*

Hospital Connection	City	Number Students	Medical: General Medicine	Medical: Pediatrics	Medical: Contagious Diseases	Medical: Tuberculosis	Medical: Nervous and Mental	Specialties of Study Surgical: General Surgery	Specialties of Study Surgical: Obstetrics	Specialties of Study Surgical: Orthopedics	Specialties of Study Surgical: Operating Room Technic	Specialties of Study Surgical: Anesthesia	Others: Laboratory	Others: X-Ray	Others: Dietetics	Others: Administration	Others: Miscellaneous
MASSACHUSETTS—Continued																	
Boston Lying-in Hospital	Boston	.....	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Children's Hospital	Boston	4	....	Yes	....	....	....	....	....	....	....	....	....	....	....	....	....
Faulkner Hospital	Boston	.....	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Hart Private Hospital	Boston	0	....	....	....	....	....	Yes	Yes	....	....	....	....	....	....	....	....
Massachusetts Eye and Ear Infirmary (a)	Boston	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Yes (13)
New England Hosp. for Women & Children	Boston	1	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Peter Bent Brigham Hospital	Boston	1	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....	....
Free Hospital for Women (e)	Brookline	10	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....	Yes (3)
Crary Clinic Hospital	Dartmouth	11	....	....	....	....	....	....	....	....	....	....	....	....	Yes	....	....
Essex Sanatorium	Middleton	0	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....
Addison Gilbert Hospital	Gloucester	0	Yes	....	....	....	....	....	....	....	....	....	....	....	....	....	....
MICHIGAN																	
Battle Creek Sanitarium	Battle Creek	36	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Yes (7)
Children's Hospital of Michigan	Detroit	.....	....	Yes	....	....	....	....	....	....	....	....	....	....	....	....	....
Grace Hospital	Detroit	44	....	....	....	....	....	Yes	....	....	....	Yes	Yes	Yes	Yes	....	....
Providence Hospital	Detroit	.....	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Women's Hospital and Infants' Home	Detroit	3	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	Yes (3)
Mercy Hospital	Muskegon	3	....	....	....	....	....	....	....	....	....	....	Yes	Yes	....	....	....
MINNESOTA																	
Bethany Home	Minneapolis	1	....	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Maternity Hospital, Inc.	Minneapolis	0	....	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....
University of Minn. School of Nursing (e)	Minneapolis	20	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Yes (1)
Kahler Hospital School of Nursing	Rochester	2	....	....	....	....	....	....	....	....	Yes	....	....	....	....	....	....
St. Mary's Hospital	Rochester	8	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Mudeura Sanitarium	Shakopee	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Yes (9)
Ancker Hospital	St. Paul	7	....	....	....	Yes	....	Yes	Yes	....	....	....	....	....	....	....	....
Gillette State Hosp. for Crippled Child'n (a)	St. Paul	3	....	Yes	....	....	....	....	....	Yes	....	....	....	....	....	....	....
MISSISSIPPI																	
King's Daughters' Hospital	Brookhaven	0	....	....	....	....	....	....	....	....	....	....	Yes	Yes	....	....	....
Vicksburg Infirmary	Vicksburg	2	....	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....
MISSOURI																	
Children's Mercy Hospital	Kansas City	0	....	Yes	....	....	....	....	....	Yes	....	....	....	....	....	....	Yes (10) (11)
St. Luke's Hospital	Kansas City	2	....	....	....	....	....	Yes	Yes	Yes	....	....	....	....	....	Yes	....
St. Vincent's Hospital	Kansas City	0	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Wheatley-Provident Hospital	Kansas City	1	Yes	Yes	....	....	....	Yes	....	....	Yes	....	....	....	....	....	Yes (4)
Willows Maternity Sanitarium	Kansas City	0	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Barnes Hospital	St. Louis	6	Yes	Yes	....	....	....	Yes	....	....	Yes	....	....	....	Yes	....	....
Evangelical Deaconess Home and Hospital	St. Louis	2	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
St. Louis City Hospital	St. Louis	1	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
St. Louis City Hospital No. 2 (Col.)	St. Louis	.....	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
St. Louis Maternity Hospital (a)	St. Louis	0	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
MONTANA																	
St. Vincent's Hospital	Billings	.....	....	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....
NEBRASKA																	
St. Elizabeth's Hospital	Lincoln	3	....	....	....	....	....	....	....	....	....	....	....	Yes	....	....	....
Creighton Memorial, St. Joseph's Hospital	Omaha	11	....	....	....	....	....	....	....	....	....	....	Yes	Yes	....	....	....
NEW JERSEY																	
Jersey City Hospital	Jersey City	5	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
NEW YORK																	
Long Island College Hospital	Brooklyn	3	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....	....
Buffalo City Hospital	Buffalo	11	....	....	....	....	....	....	....	....	....	Yes	Yes	Yes	....	Yes	(2) Yes (7)
St. Mary's Hospital (a)	Buffalo	3	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Bellevue Hospital	New York City	6	Yes	Yes	....	....	....	Yes	Yes	....	Yes	....	....	....	....	....	....
Harlem Hospital	New York City	9	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Lying-in Hospital (a)	New York City	10	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Manhattan Eye, Ear and Throat Hosp. (c)	New York City	22	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Yes (13)
Misericordia Hospital	New York City	5	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Montefiore Hospital for Chronic Diseases	New York City	.....	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	Yes (7)
New York Nursery and Child's Hospital (a)	New York City	7	....	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....
New York Post Graduate Medical School and Hospital	New York City	12	....	....	....	....	....	....	....	....	Yes	Yes	....	....	....	....	....
Presbyterian Hosp. in the City of New York	New York City	16	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Woman's Hospital in the State of N. Y. (c)	New York City	84	....	....	....	....	....	....	Yes	....	Yes	....	Yes	Yes	....	....	Yes (3)
Mountain Clinic Hospital	Olean	0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Yes (4)
Seaside Hospital (a)	Staten Island	1	....	Yes	....	....	....	....	....	....	....	....	....	....	....	....	....
Troy Hospital	Troy	1	....	....	....	....	....	Yes	....	....	Yes	....	....	....	....	....	....
Bloomingdale Hospital	White Plains	6	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
NORTH CAROLINA																	
Asheville Mission Hospital	Asheville	1	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Angel's Hospital	Franklin	2	....	....	....	....	....	....	....	....	....	Yes	....	Yes	....	....	....
North Carolina Sanitarium for the Treatment of Tuberculosis	Sanatorium	0	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....
NORTH DAKOTA																	
Mercy Hospital and Mercy Detention Hosp.	Devils Lake	0	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
OHIO																	
Bethseda Hospital and Deaconess Ass'n	Cincinnati	2	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Cincinnati General Hospital	Cincinnati	8	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	Yes (5)
Western Reserve Univ. School of Nursing (f)	Cleveland	20	....	Yes	....	....	....	....	Yes	....	Yes	....	....	....	....	....	Yes (5)
St. Ann's Maternity Hospital	Cleveland	2	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Sanitarium Hospital	Newark	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
East Side Hospital	Toledo	2	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	Yes (9)

TABLE 10.—*Nurse Training Schools Offering Graduate Courses—Continued*

Hospital Connection	City	Number Students	Specialties of Study: Medical: General Medicine	Medical: Pediatrics	Medical: Contagious Diseases	Medical: Tuberculosis	Medical: Nervous and Mental	Surgical: General Surgery	Surgical: Obstetrics	Surgical: Orthopedics	Surgical: Operating Room Technic	Surgical: Anesthesia	Others: Laboratory	Others: X-Ray	Others: Dietetics	Others: Administration	Others: Miscellaneous
OKLAHOMA																	
Wesley Hospital	Oklahoma City	3	....	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....
OREGON																	
St. Vincent's Hospital	Portland	3	....	....	....	....	....	Yes	Yes	....	....	Yes	....	....	....	....	....
PENNSYLVANIA																	
North Pennsylvania Hospital and Sanit...	Austin	3	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Eagleville Sanatorium for Consumptives..	Eagleville	0	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....
Hospitals of the Graduate School of Med...	Philadelphia	21	....	....	....	....	....	....	....	....	....	Yes	Yes	....	....	....	....
Hospital of the University of Pennsylvania	Philadelphia	6	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....	....
Howard Hospital	Philadelphia	5	Yes	....	....	....	....	Yes	....	....	....	Yes	....	....	....	....	....
Kensington Hospital for Women	Philadelphia	0	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Maternity Hospital	Philadelphia	0	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Misericordia Hospital	Philadelphia	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Northeastern Hospital of Philadelphia	Philadelphia	1	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....	....
Pennsylvania Hospital, Department for Mental and Nervous Diseases (g)	Philadelphia	19	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....
Pennsylvania Hosptial, Department for Sick and Injured	Philadelphia	8	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Philadelphia Hosp. for Contagious Dis. (a)	Philadelphia	.....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....	....
Philadelphia General Hospital	Philadelphia	10)	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Presbyterian Hospital in Philadelphia	Philadelphia	0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Preston Retreat	Philadelphia	0	....	....	....	....	....	....	....	....	....	....	....	....	Yes	....	....
St. Agnes' Hospital	Philadelphia	.....	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....	....
West Philadelphia Hospital for Women	Philadelphia	4	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Women's Homeopathic Hosp. of Phila	Philadelphia	3	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Woman's Hospital of Philadelphia	Philadelphia	4	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Children's Hospital of Pittsburgh	Pittsburgh	2	....	Yes	....	....	....	....	....	Yes	....	....	....	....	....	....	....
Elizabeth Steele Magee Hospital	Pittsburgh	4	....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....
Tuberculosis League Hospital (e)	Pittsburgh	0	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....
Western Pennsylvania Hospital	Pittsburgh	.....	Yes	....	....	....	....	Yes	Yes	....	Yes	....	....	....	....	....	....
Homeopathic Medical & Surgical Hospital	Reading	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Yes (1)
G. H. Moore's Hospital(e)	Schuykill Haven	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Yes (13)
St. Joseph's Children & Matern'y Hosp. (a)	Scranton	0	....	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....
White Haven Sanatorium	White Haven	1	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....
RHODE ISLAND																	
Butler Hospital	Providence	18	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....
Providence City Hospital (a)	Providence	0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Yes (6)
Rhode Island Hospital	Providence	2	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....	Yes (7)
SOUTH CAROLINA																	
Columbia Hospital of Richland County	Columbia	3	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....
South Carolina Baptist Hospital	Columbia	2	....	....	....	....	....	....	....	....	....	....	Yes	....	Yes	....	....
South Carolina State Hospital	Columbia	1	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....
Spartanburg General Hospital	Spartanburg	2	Yes	Yes	....	....	....	Yes	Yes	....	....	....	....	....	....	....	....
SOUTH DAKOTA																	
St. Luke's Hospital	Aberdeen	.....	....	....	....	....	....	....	....	....	....	....	....	....	....	Yes	Yes (1)
TENNESSEE																	
Newell and Newell Sanitarium	Chattanooga	1	....	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....
Memphis General Hospital	Memphis	6	....	....	Yes	....	....	Yes	Yes	....	....	....	....	....	....	....	....
St. Joseph's Hospital	Memphis	2	....	....	....	....	....	....	....	....	....	....	Yes	Yes	....	....	....
Millie E. Hale Hospital (Col.)	Nashville	.....	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....	Yes (2)
Nashville City Hospital	Nashville	3	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....
Vanderbilt University Hosptial	Nashville	0	Yes	Yes	....	....	....	....	Yes	....	Yes	....	....	....	....	....	....
TEXAS																	
Baylor Hospital	Dallas	.....	....	....	....	....	....	....	....	....	....	Yes	....	....	....	....	....
Baptist Hosptial of Ft. Worth	Ft. Worth	2	....	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Comal Sanitarium	New Braunfels	1	....	....	....	....	....	....	....	....	....	....	....	Yes	....	....	Yes (7)
Robert B. Green Memorial Hospital	San Antonio	.....	Yes	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....
Scott and White Hospital	Temple	25	....	....	....	....	....	....	....	....	....	....	....	Yes	....	....	Yes (4)
VIRGINIA																	
George Ben Johnson Memorial Hospital	Abingdon	1	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....
Piedmont Sanatorium	Burkeville	.....	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....
Catawa Sanatorium	Catawa Sanat.	0	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....
Blue Ridge Sanatorium	Charlottesville	0	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....	....
Tucker Sanatorium, Inc	Richmond	1	....	....	....	....	Yes	....	....	....	....	....	....	....	....	....	....
University of Virginia Hospital	University	1	....	....	....	....	....	....	....	....	....	....	....	....	Yes	....	....
WASHINGTON																	
Firland Sanatorium (c)	Richmond Highlands	36	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Yes (1)
St. Joseph's Hospital	Tacoma	3	....	....	....	....	....	....	Yes	....	....	Yes	Yes	Yes	....	....	....
WEST VIRGINIA																	
Kessler-Hatfield Hospital	Huntington	.....	....	....	....	....	....	....	....	....	....	....	Yes	Yes	....	....	Yes (12)
Total Hospitals, 189; Total Students		1,045	34	27	8	16	12	55	54	5	23	27	25	22	7	12	40

(1) Public Health Nursing.
(2) Social Service.
(3) Gynecology.
(4) Out-Patient Department Nursing.
(5) Practice and Principles of Teaching.
(6) Ward Supervision.
(7) Physical Therapy.
(8) Private Nursing.
(9) Massage.
(10) Heliotherapy.
(11) Curative Play.
(12) Hydro-electrotherapy.
(13) Eye, Ear and Throat.

(a) Gives graduate courses and affiliates for undergraduates only.
(b) Includes Highland Hospital of Alameda County, Oakland.
(c) Graduate instruction only.
(d) Includes Robert W. Long Hospital and James Whitcomb Riley Hospital for Children.
(e) Includes University Hospital, Minneapolis General Hospital, Charles T. Miller Hospital and Northern Pacific Beneficial Association Hospital.
(f) Includes Lakeside, Maternity and Babies' and Children's Hospitals.
(g) School of nursing for women.

five in clinical laboratory work; twenty-three in operating room technic, and twenty-two in roentgen-ray work. Besides those named in the heading, courses in twelve other special subjects are included under "miscellaneous" but they are named in the footnotes.

REGISTERED NURSES IN THE UNITED STATES

The total number of nurses registered in each state and the total for the United States are shown in table 11. As noted, these are divided into those registered prior to 1924, the numbers registered in each of the last three years, and the total registered up to Jan. 1, 1927. It is worthy of note that the numbers registered each year have increased from 15,725 in 1924 to 18,187 in 1925, and 19,854 in 1926, the total number registered in all states since Jan. 1, 1923, being 327,045.

TABLE 11.—*Number of Nurses Registered by State Boards of Nurse Examiners*

State	No. Registered to Jan. 1, 1924	No. Registered in 1924	No. Registered in 1925	No. Registered in 1926	Total No. Registered to Jan. 1, 1927
Alabama	1,401	172	196	254	2,023
Arizona	87	256	246	289	878
Arkansas	1,122	118	103	128	1,471
California	12,261	807	1,171	1,704	16,033
Colorado	4,223	291	346	396	5,256
Connecticut	3,484	419	453	435	4,791
Delaware	417	50	58	34	559
Dist. of Columbia	1,923	215	215	221	2,574
Florida	1,218	376	483	1,020	3,097
Georgia	1,695	162	84	285	2,226
Idaho	256	70	49	47	422
Illinois	11,282	800	1,464	1,207	14,813
Indiana	3,951	267	375	305	4,898
Iowa	5,157	411	466	282	6,316
Kansas	2,619	304	279	245	3,447
Kentucky	1,975	161	202	230	2,568
Louisiana	2,129	216	228	277	2,850
Maine	1,588	149	291	127	2,065
Maryland	3,664	323	356	356	4,699
Massachusetts	12,993	746	880	972	15,591
Michigan	7,290	1,056	1,170	540	10,056
Minnesota	5,619	613	642	710	7,584
Mississippi	950	105	107	114	1,276
Missouri	8,952	602	461	605	10,680
Montana	1,283	108	82	125	1,598
Nebraska	2,673	189	196	215	3,273
Nevada	100	.....	.....	.....	.....
New Hampshire	1,198	110	93	90	1,491
New Jersey	2,655	192	317	505	3,669
New Mexico	108	130	32	30	390
New York	112,875	1,546	1,893	2,307	118,621
North Carolina	2,157	257	327	313	3,054
North Dakota	292	124	101	116	633
Ohio	8,612	563	681	805	10,661
Oklahoma	1,436	141	244	207	2,028
Oregon	1,541	135	141	126	1,943
Pennsylvania	18,464	1,025	1,144	1,616	22,249
Rhode Island	1,526	113	125	159	1,923
South Carolina	1,159	70	59	137	1,425
South Dakota	915	116	113	128	1,272
Tennessee	2,646	239	284	274	3,473
Texas	3,977	550	650	427	5,604
Utah	895	56	98	90	1,139
Vermont	885	64	79	61	1,089
Virginia	3,203	281	345	335	4,164
Washington	2,168	224	214	256	2,862
West Virginia	1,492	167	169	168	1,996
Wisconsin	4,255	350	513	522	5,640
Wyoming	518	46	52	59	675
Totals	273,379	15,725	18,187	19,854	327,045

REGISTERED NURSES IN PROPORTION TO POPULATION

The number of registered nurses in each state and in the United States in proportion to population is shown in table 12. From this it can be seen that in the United States there are slightly less than 28 registered nurses to every 10,000 people. By far the largest supply in any state is found in New York, where there are about 105 registered nurses to every 10,000 people; the state having the next largest number in proportion to population is Colorado, with approximately only 50 registered nurses to each 10,000 people, followed by the District of Columbia with 49, California and Massachusetts each with 37, Vermont with approximately 31, and Missouri with 30. The lowest supply is in Georgia and Mississippi, which have only 7 nurses to each 10,000 people, followed by Arkansas and South Carolina, with slightly less than 8, Alabama with exactly 8, Idaho with slightly in excess of 8, Oklahoma with approximately 9, and North Dakota with about 10. These figures are based on table 11, showing the total number of nurses registered in each state. Just what proportions are available for nursing service and how many unregistered nurses there are cannot be stated.

It is hardly probable that the figures in tables 11 and 12 show the entire supply of nurses in all states, but merely those who are *registered*. Just how long the various states have been registering nurses and how careful they may have been in insisting that all nurses be registered cannot be stated at this time. The unusually large number of nurses in New York in proportion to population is undoubtedly due to the fact that in that state nurse education and practice has always been under the supervision of the Board of Regents.

TABLE 12.—*Registered Nurses in Proportion to Population*

State	Estimated Population July 1, 1926	Nurses by States	Nurses per 10,000 People
Alabama	2,526,000	2,023	8.0
Arizona	445,000	878	19.7
Arkansas	1,903,000	1,471	7.7
California	4,316,000	16,033	37.2
Colorado	1,059,000	5,256	49.7
Connecticut	1,606,000	4,791	29.8
Delaware	240,000	559	23.3
District of Columbia	528,000	2,574	48.8
Florida	1,317,000	3,097	23.5
Georgia	3,139,000	2,226	7.1
Idaho	522,000	422	8.1
Illinois	7,203,000	14,813	20.6
Indiana	3,124,000	4,898	15.7
Iowa	2,423,000	6,316	26.1
Kansas	1,821,000	3,447	18.9
Kentucky	2,524,000	2,568	10.2
Louisiana	1,919,000	2,850	14.9
Maine	790,000	2,065	23.1
Maryland	1,580,000	4,699	29.7
Massachusetts	4,197,000	15,591	37.1
Michigan	4,396,000	10,056	22.9
Minnesota	2,651,000	7,584	28.6
Mississippi	1,790,618	1,276	7.1
Missouri	3,498,000	10,680	30.5
Montana	695,000	1,598	23.0
Nebraska	1,385,000	3,273	23.6
Nevada	77,407	.....	.....
New Hampshire	454,000	1,491	32.8
New Jersey	3,680,000	3,669	10.0
New Mexico	388,000	390	10.1
New York	11,304,000	118,621	104.9
North Carolina	2,858,000	3,054	10.7
North Dakota	641,192	633	9.9
Ohio	6,600,000	10,661	16.2
Oklahoma	2,342,000	2,028	8.7
Oregon	877,000	1,943	22.2
Pennsylvania	9,614,000	22,249	23.1
Rhode Island	693,000	1,923	27.7
South Carolina	1,826,000	1,425	7.8
South Dakota	689,000	1,272	18.5
Tennessee	2,468,000	3,473	14.1
Texas	5,313,000	5,604	10.5
Utah	514,000	1,139	22.1
Vermont	352,428	1,089	30.8
Virginia	2,519,000	4,164	16.5
Washington	1,538,000	2,862	18.6
West Virginia	1,669,000	1,996	12.0
Wisconsin	2,885,000	5,640	19.5
Wyoming	236,000	675	28.6
Totals	117,135,645	327,045	27.9

SIX ESSENTIAL QUALITIES FOR GOOD NURSING[1]

1. *Manual Skill.*—Good nursing has at least six important characteristics. Simplest to teach and to understand is the characteristic of manual skill. The good nurse has learned how to move quietly and gently; how to make beds, and apply bandages, and do many other things, some of which call for nice muscular co-ordination.

When a doctor wants a nurse "who knows her business and can follow orders," he probably means one who has learned good methods for doing things, and has practiced them so much that they are matters of habit, and she can do them whenever needed, and invariably well. It is this physical part of nursing which lends itself most readily to job analysis, and which is probably in the minds of most people when they talk of "basic nursing" which every nurse must learn.

2. *Leadership.*—The other five characteristics of good nursing are a little less easy to describe. Important among them is what the Spaniards call the "gift of people" and what, for want of a better word, we can call "leadership." It is what enables the nurse to lead her patients to believe in the doctor and to take the doctor's orders seriously. It makes her able to teach the patient not only what the doctor wants him to do, but why. It enables her to get the patient to eat when he is not hungry. It is a characteristic born in or acquired by successful politicians, and salesmen, and women of "charm" and it is particularly valuable in the nurse. It is probably what the doctor means when he speaks of the nurse who "knows how to handle people."

3. *Persistence.*—Another quality essential to good nursing is persistence. It is the quality which, at the scene of disaster, keeps the Red Cross nurse on duty 50, 60, 70 hours at a stretch. It is what keeps doctors and nurses at the bedside, fighting desperately to save the patient who they know cannot be saved—working to perform a miracle. It is what the athlete calls "the ability to take punishment." The deep underlying respect and affection between the medical and nursing professions, which is so impressive to the outsider, rests upon the mutual recognition that nurses and doctors know how to fight. They carry on.

4. *Experience.*—A fourth characteristic of good nursing is the knowledge of what it is all about. The good nurse is the experienced nurse. She has seen, cared for and thought about many different sorts of people, with many different sorts of trouble. She has read books and talked with doctors and other nurses. She has a broad background of information and practice. The superintendent of a famous metropolitan hospital, handling a wide variety of cases, recently remarked, "There is an enormous difference between the two-year and the three-year nurse; and the superiority of the three-year product results not from the extra classes she may have had, but from the additional twelve months of responsible and intensive contact with sick people. She is permeated with her subject."

5. *Kindness.*—The fifth characteristic is kindness but of a sort which is extremely rare because it is kindness dominated by intelligence. It is a characteristic peculiar to good nurses that keeps in mind the patient's physical and mental well being. It is the attitude of mind which, when her post-operative patient has just dropped asleep after having received ⅜ of a grain of morphine, makes the nurse omit the morning bath and let her sleep, instead of forcibly shaking her awake again.

This attitude of mind is illustrated by the story of the private duty nurse who was called into an isolated Illinois farmhouse in the dead of winter to a scarlet fever case. The child patient was apparently dying of exhaustion, because she could not sleep. The mucous membrane of nose and throat had become so badly swollen that whenever she fell asleep the dried tongue stopped the child's breathing and she woke again. The nurse, watching the child, discovered the difficulty. Wrapped in a blanket, in an unheated bedroom in zero weather, she sat all night long at the bedside with a glass of water and a medicine dropper, letting fall drop after drop of water on the child's swollen tongue, so that the child slept peacefully all night through.

That was more than kindness or sympathy. It called for endurance, for insight into what was wrong, and for ingenuity as to the remedy. This type of mind is probably what nurses and doctors mean when they speak of "the art of nursing." It was described recently as characteristic of "the nurse who knows what to do—when."

6. *Intuition.*—Finally, perhaps the most interesting and dramatic of the qualities which make for good nursing is a kind of acute perception which gives to some nurses what seems to the outsider an uncanny ability to know what is happening to the patient. It is sometimes spoken of as "intuition," or the nurse's "sixth sense." It seems to be acquired by especially intelligent nurses, as a result of long hours of concentrated highly keyed attention to patients. These particular nurses become sensitive to extremely slight stimuli, such as scarcely perceptible changes in the color of a patient's skin, or the odor of the room, or the angle his hand makes with his wrist.

It is this extreme responsiveness to slight stimuli which makes possible this story of a ward supervisor in a maternity hospital who said, "I've sort of got so I recognize patients who are going to need watching. There was one woman—for example—I had finished my rounds and was going off duty, but I couldn't get her off my mind. I had been in to see her and she seemed all right, but I had a hunch she wasn't. So I went back for another look. And believe me, one look was enough! I simply dove under the bed clothes and grabbed her!" It was a postpartum hemorrhage. Most good nurses would have recognized such a hemorrhage after it was well started, but only the exceptional nurse, peculiarly sensitive to extremely slight stimuli, would recognize it at its onset.

Of these six characteristics, only manual skill is usually directly aimed for in training, and yet it is perhaps the least important of the series. The others are acquired in varying degrees by the more intelligent and experienced nurses.

1. Extract from the Report of the Committee on the Grading of Nursing Schools—"A Five Year Program," prepared by its Director, May Ayres Burgess, Ph.D.

GOOD NURSING A DUTY OF THE HOSPITAL[2]

The main duties of the hospital are:

1. The financial support of the institution. This includes the collection of charges, raising of funds from the public and their investment and expenditure.
2. The business administration.
3. Feeding and housing of the patients and staff and all the housekeeping involved.
4. Providing diagnostic and therapeutic facilities for the use of the physician.
5. Maintenance of an adequate nursing service.
6. Housing of hospital records and making them always available.
7. The determination of the economic and social requirements for admission.

The duties of the physician are:

1. Professional care of the patient, whether he be in the ward, in the private rooms or in the outpatient department.
2. Responsibility for the work of the diagnostic and therapeutic laboratories, and research.
3. The maintenance of proper records.
4. Responsibility for professional requirements for admission.
5. Supervision of the nursing of the patients.

The policies of administration and of interrelations between the hospital and physician vary greatly throughout the country according to the character of the hospital and the community which it serves. They are affected not only by the size and character of the community, but by the relative proportion of free and private patients, by the kind of patients admitted—that is, whether it is a general or a special hospital—and by the traditions of the place.

2. By William Darrach, M.D., in "The Shattuck Lecture" on Inter-Relations of the Physicians and the Hospital, from the Boston Medical and Surgical Journal, June 17, 1926.

NURSE TRAINING SCHOOLS IN HOSPITALS IN THE UNITED STATES

This list names all hospitals reported as conducting nurse training schools, excluding 38 irregular hospitals which are considered unworthy. Some of the hospitals failed to send in reports; otherwise the data are complete. The list shows the name, location and bed capacity of each hospital, the requirements for admission to the nurse training school, the numbers of pupil nurses and graduates last year, and whether or not the school is accredited by its state board of nurse examiners.

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
ALABAMA						
Benevolent Soc. Hosp.	Albany	28	2	9	1	Yes
Russell Hospital	Alexander City	54	2	5	2	Yes
Andalusia City Hosp.	Andalusia	20	2	5	1	No
Covington Co. Hosp.	Andalusia	25	4	16	4	Yes
Sellers' Hosp. Co., Inc.	Anniston	44	2	7	2	No
St. Luke's Hospital	Anniston	25	2	9	..	Yes
Bessemer Gen. Hosp.	Bessemer	50	4	13	3	Yes
Birmingham Baptist Hospital	Birmingham	100	4	45	..	Yes
Birmingham Gen. Hosp.	Birmingham	75	gr. sch.	20	6	Yes
Fraternal Hosp., Inc.	Birmingham	50	2	16	3	Yes
Gorgas Hotel Hosp.	Birmingham	75	4	8	New	No
Hillman Hospital	Birmingham	140	2	39	9	Yes
Norwood Hosp., Inc.	Birmingham	145	2	40	9	Yes
South Highlands Infirmary, Inc.	Birmingham	135	1	61	4	Yes
St. Vincent's Hosp.	Birmingham	110	2	50	12	Yes
Tuggle Institute Hosp.[1]	Birmingham	40	..	..	..	No
Central Alabama Hosp.	Clanton	27	gr. sch.	5	1	No
Juanita Coleman Hospital	Demopolis	14	4	13	1	No
Dr. M. S. Davie's Private Hospital	Dothan	50	gr. sch.	12	3	Yes
Frasier's Hospital	Dothan	50	2	31	4	Yes
Moody Hospital	Dothan	100	4	37	4	Yes
Coffee County Memorial Hospital	Enterprise	40	4	8	New	No
Britt Infirmary	Eufaula	45	4	34	5	Yes
Salter Hospital	Eufaula	22	4	12	3	Yes
Employees' Hospital, Tenn. Coal, Iron & Ry. Co.	Fairfield	280	4	70	12	Yes
Young Infirmary and Lakeview Hospital	Florala	20	1	7	1	No
Eliza Coffee Memorial Hospital	Florence	40	4	16	4	Yes
Ralls' Sanatorium, Inc.	Gadsden	50	gr. sch.	15	2	Yes
Huntsville Hospital, Inc.	Huntsville	40	2	11	3	Yes
Walker County Hosps.	Jasper	50	gr. sch.	12	2	Yes
City Hospital	Mobile	150	2	17	7	Yes
Inge-Bondurant Sanat.	Mobile	50	2	13	2	Yes
Mobile Infirmary	Mobile	60	3	25	9	Yes
Providence Infirmary	Mobile	100	2	25	7	Yes
Fraternal Hosp. School of Nursing[1]	Montgomery	25	4	12	5	Yes
Hale Infirmary[1]	Montgomery	35	2	14	3	Yes
Highland Park Sanat.	Montgomery	30	4	13	3	Yes
Laura Hill Hospital	Montgomery	50	2	20	7	No
Montgomery Memorial Hospital	Montgomery	55	3	26	..	No
St. Margaret's Hosp.	Montgomery	140	1	32	12	Yes
East Alabama Hospital Association	Opelika	30	4	8	1	Yes
Knight Sanatorium	Roanoke	39	4	6	2	Yes
Alabama Bapt. Hosp.	Selma	100	4	31	2	Yes
Burwell Infirmary	Selma	22	4	5	..	No
Vaughan Mem. Hosp.	Selma	60	2	37	5	Yes
Drumm'd Fraser Hosp.	Sylacauga	35	1	7	1	Yes
Sylacauga Inf'y, Inc.	Sylacauga	35	2	8	5	Yes
Citizen's Hospital	Talladega	50	2	10	1	Yes
Beard Mem. Hospital	Troy	27	1	9	1	No
Druid City Hospital, Inc.	Tuscaloosa	55	2	15	5	Yes
Bryce Hospital	Tuscaloosa	2,100	gr. sch.	26	3	Yes
John A. Andrew Memorial Hospital[1]	Tuskegee Inst.	64	3	32	12	Yes
ARIZONA						
Arizona Deaconess Hospital and Home	Phoenix	97	3	34	11	Yes
St. Joseph's Hospital	Phoenix	120	2	30	9	Yes
St. Mary's Hospital and Sanitarium	Tucson	84	2	14	5	Yes
ARKANSAS						
Blytheville Gen. Hosp.	Blytheville	33	2	9	..	No
Faulkner County Hosp.	Conway	30	4	7	3	Yes
Crossett Hospital	Crossett	26	2	10	2	Yes
Warner-Brown Hosp.	El Dorado	85	2	24	5	Yes
Fayetteville City Hosp.	Fayetteville	60	4	27	3	Yes
Sparks' Mem. Hosp.	Ft. Smith	100	4	30	8	Yes
St. Edward's Mercy Hospital	Ft. Smith	75	1	26	9	Yes
St. John's Hospital	Ft. Smith	53	..	..	..	Yes
Helena Hospital	Helena	35	1	11	2	Yes
Leo N. Levi Memorial Hospital Assn.	Hot Springs National Park	60	4	16	5	Yes
Ozark Sanatorium	Hot Springs National Park	60	2	7	..	Yes
St. Joseph's Infirmary	Hot Springs National Park	88	1	14	4	Yes
St. Bernard's Hospital	Jonesboro	102	1	25	6	Yes
Baptist State Hosp.	Little Rock	325	..	..	..	Yes
Bush Memorial Hosp.	Little Rock	48	4	5	1	Yes
Grant Southern Fraternal Hospital[1]	Little Rock	40	2	10	1	Yes
Little Rock Gen. Hosp.	Little Rock	100	4	28	4	Yes
Pulaski County Hosp.	Little Rock	200	4	15	4	Yes
Royal Circle Hosp.[1]	Little Rock	50	4	7	5	No
St. Vincent's Infirmary	Little Rock	135	2	66	17	Yes
United Friends Hospital[1]	Little Rock	25	2	9	1	Yes
Dickson Mem. Hosp.	Paragould	22	2	7	6	Yes
Davis Hospital	Pine Bluff	50	1	16	..	Yes
Cora Donnell Hospital	Prescott	30	4	20	2	Yes
St. Mary's Hospital	Russellville	35	4	18	5	Yes
Michael Meagher Mem Hospital	Texarkana	75	2	21	6	Yes
St. Louis Southwestern Hospital	Texarkana	152	2	13	3	Yes
CALIFORNIA						
Alameda Sanitorium on South Shore	Alameda	90	4	32	7	Yes
Mercy Hospital	Bakersfield	60	4	16	5	Yes
Alta Bates Sanatorium	Berkeley	40	4	21	8	Yes
St. Joseph Hospital[2]	Eureka	60	1	..	..	Yes
San Joaquin General Hospital	French Camp	341	1	24	6	Yes
Burnett Sanitarium	Fresno	150	4	62	16	Yes
General Hospital of Fresno County	Fresno	300	2	21	2	Yes
Glendale Sanitarium & Hospital, Inc.	Glendale	190	4	66	24	Yes
Loma Linda Sanitarium and Hospital	Loma Linda	155	4	81	17	Yes
Seaside Hospital	Long Beach	150	2	85	25	Yes
Calif. Lutheran Hosp.	Los Angeles	415	4	107	34	Yes
Hollywood Hospital	Los Angeles	139	4	37	23	Yes
Hospital of the Good Samaritan, Inc.	Los Angeles	140	4	81	17	Yes
Los Angeles Gen. Hosp.	Los Angeles	1,249	4	276	37	Yes
Methodist Hospital of Southern California	Los Angeles	275	4	100	15	Yes
Queen of Angels Hosp.	Los Angeles	100	4	26	New	No
Pacific Hospital	Los Angeles	79	2	40	13	Yes
St. Vincent's Hospital	Los Angeles	110	4	66	11	Yes
White Memorial Hosp.	Los Angeles	108	4	87	26	Yes
Paradise Valley Sanitarium and Hospital	National City	135	2	50	20	Yes
Fabiola Hosp. Assn.	Oakland	150	4	86	25	Yes
Providence Hospital	Oakland	250	1	51	12	Yes
Samuel Merritt Hosp.	Oakland	118	4	93	29	Yes
Orange County Hosp.	Orange	125	1	27	6	Yes
Pasadena Hosp. Assn.	Pasadena	200	4	80	18	Yes
Pomona Valley Hosp.	Pomona	40	2	14	8	Yes
Mater Misericordiae Hospital	Sacramento	150	2	38	5	Yes
Sacramento Hospital	Sacramento	500	1	32	5	Yes
San Bernardino County Hospital	San Bernardino	212	1	21	6	Yes
Mercy Hospital	San Diego	175	1	41	12	Yes
San Diego County General Hospital	San Diego	275	4	63	17	Yes
Franklin Hospital	San Francisco	210	1	58	17	Yes
French Hospital	San Francisco	220	2	57	..	Yes
Hospital for Children[3]	San Francisco	245	4	57	15	Yes
Mary's Help Hospital	San Francisco	130	2	42	5	Yes
Mt. Zion Hosp., Inc.	San Francisco	150	4	62	12	Yes
San Francisco Hosp.	San Francisco	1,072	4	98	21	Yes
St. Francis Hospital	San Francisco	325	1	145	51	Yes
St. Joseph's Hospital	San Francisco	200	1	43	6	Yes
St. Luke's Hospital	San Francisco	200	2	103	26	Yes
St. Mary's Hospital	San Francisco	210	2	71	23	Yes
Stanford School of Nursing[4]	San Francisco	310	4	171	38	Yes
University of California Hospital	San Francisco	255	4	128	37	Yes
St. Helena Sanitarium and Hospital	Sanitarium	136	4	60	17	Yes
O'Connor Sanitarium	San Jose	80	1	47	14	Yes
San Jose Hosp., Inc.	San Jose	96	4	52	22	Yes
Santa Clara Co. Hosp.	San Jose	288	1	32	7	Yes
Alameda County Hospital and Infirmary[5]	San Leandro	567	4	58	14	Yes
San Luis Sanitarium	San Luis Obispo	20	1	10	6	Yes
Santa Barbara Cottage Hospital	Santa Barbara	125	4	42	4	Yes
St. Francis' Hospital	Santa Barbara	40	2	14	6	Yes

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
Dameron Hosp., Inc...	Stockton.....	50	1	39	6	Yes
St. Joseph's Home and Hospital	Stockton.....	85	1	43	11	Yes
Emanuel Hospital.....	Turlock.....	40	4	20	8	Yes
COLORADO						
Boulder-Colo. Sanit...	Boulder.....	100	4	45	8	Yes
Beth-El Gen. Hosp.....	Colo. Springs..	104	4	59	16	Yes
Glockner Sanatorium and Hospital.....	Colo. Springs..	210	2	31	7	Yes
St. Francis Hospital...	Colo. Springs..	150	2	20	7	Yes
Children's Hospital [3]...	Denver.....	117	2	55	14	Yes
Colorado General Hosp.	Denver.....	154	4	37	3	Yes
Denver General Hosp...	Denver.....	325	2	80	24	Yes
Mercy Hospital.....	Denver.....	160	2	53	23	Yes
Park Avenue Hosptial.	Denver.....	50	2	14	2	Yes
Presbyterian Hospital of Colorado.....	Denver.....	148	4	37	..	No*
St. Anthony's Hosp....	Denver.....	200	2	44	13	Yes
St. Joseph's Hospital..	Denver.....	225	2	73	19	Yes
St. Luke's Hosp. Assn.	Denver.....	200	4	98	26	Yes
Mercy Hospital.....	Durango.....	30	2	9	..	No
St. Mary's Hospital...	Grand Junction	65	2	16	4	Yes
Weld County Hospital [6]	Greeley.....	122	2	25	2	Yes
City Hospital.....	La Junta.....	30	2	21	5	Yes
Mennonite Sanit.[3].....	La Junta.....	40	2	20	5	Yes
Longmont Hosp. Assn.	Longmont.....	50	2	11	2	Yes
Minnequa Hospital of Colo. Fuel & Iron Co.	Pueblo.....	225	4	56	13	Yes
St. Mary Hospital.....	Pueblo.....	150	2	34	9	Yes
Red Cross Hospital....	Salida.....	50	2	15	3	Yes
Mt. San Rafael Hosp..	Trinidad.....	75	2	14	..	Yes
CONNECTICUT						
Bridgeport Hospital...	Bridgeport.....	280	1	131	25	Yes
Park City Hospital....	Bridgeport.....	45	..	..	..	No
St. Vincent's Hospital.	Bridgeport.....	225	1	85	..	Yes
Danbury Hospital.....	Danbury.....	125	1	30	12	Yes
Griffin Hospital.....	Derby.....	80	1	33	9	Yes
Greenwich Hosp. Assn.	Greenwich.....	87	1	37	5	Yes
Charter Oak Private Hospital, Inc.[3].....	Hartford.....	14	gr. sch.	6	6	No
Hartford Hospital.....	Hartford.....	619	4	223	55	Yes
Hartford Retreat [3]....	Hartford.....	200	gr. sch.	8	3	No
Mt. Sinai Hospital.....	Hartford.....	75	1	15	..	No
St. Agnes' Home.....	Hartford.....	11	gr. sch.	28	18	No
St. Francis' Hospital..	Hartford.....	500	1	188	40	Yes
Meriden Hospital.....	Meriden.....	88	1	34	7	Yes
Conn. State Hosp.[3]....	Middletown....	2,800	1	32	5	Yes
Middlesex Hospital....	Middletown....	126	1	41	8	Yes
New Britain Gen. Hosp.	New Britain....	190	1	47	20	Yes
Grace Hospital.....	New Haven.....	280	1	111	33	Yes
Hosp. of St. Raphael.	New Haven.....	200	1	69	17	Yes
Yale University School of Nursing, New Haven Hospital.....	New Haven.....	378	2 Yrs. Coll.	42	9	Yes
Home Memorial Hospital, Inc.....	New London...	50	1	14	2	Yes**
Lawrence and Memorial Associated Hospitals	New London...	137	1	64	19	Yes
Norwalk General Hosp.	Norwalk.....	70	1	27	6	Yes
Norwich State Hosp.[3]..	Norwich.....	1,941	1	30	7	No
William W. Backus Hospital	Norwich.....	90	1	23	8	Yes
Stamford Hospital.....	Stamford.....	146	1	58	14	Yes
St. Mary's Hospital...	Waterbury.....	270	1	82	15	Yes
Waterbury Hospital...	Waterbury.....	185	4	58	17	Yes
St. Joseph's Hospital..	Willimantic....	45	1	26	11	Yes
Litchfield Co. Hospital of Winchester.....	Winsted.....	70	1	27	9	Yes
DELAWARE						
Beebe Hospital of Lewes, Inc.....	Lewes.....	57	2	12	3	Yes
Milford Emerg. Hosp..	Milford.....	35	4	9	9	No
Delaware Hospital....	Wilmington....	175	1	54	7	Yes
Homeopathic Hospital Association	Wilmington....	86	1	27	3	Yes
Physicans' and Surgeons' Hospital.....	Wilmington....	60	1	18	6	Yes
St. Francis Hospital...	Wilmington....	60	1	28	..	Yes
DISTRICT OF COLUMBIA						
Central Dispensary and Emergency Hospital.	Washington...	160	2	70	9	Yes
Children's Hospital of Dist. of Columbia[3]..	Washington...	150	2	35	8	Yes
Freedmen's Hospital [1].	Washington...	278	4	70	22	Yes
Gallinger Mun. Hosp..	Washington...	365	2	51	6	Yes
Garfield Mem. Hosp....	Washington...	320	3	81	23	Yes
Georgetown University Hospital	Washington...	227	2	54	7	Yes
George Washington University Hospital..	Washington...	100	4	50	14	Yes
National Homeopathic Hospital	Washington...	55	2	31	7	Yes
Providence Hospital...	Washington...	310	2	91	24	Yes
Sibley Mem. Hosp.....	Washington...	108	4	94	18	Yes
St. Elizabeth's Hosp.[3].	Washington...	4,418	2	9	4	Yes
Walter Reed Gen. Hosp.	Washington...	1,200	4	154	46	Yes
Washington Sanitarium and Hospital...	Washington...	200	4	99	29	Yes
FLORIDA						
Arcadia Gen. Hosp.....	Arcadia.....	25	2	8	3	Yes†
Florida State Hosp.[3]..	Chattahoochee	2,250	2	26	8	Yes†
McLeod Hospital.....	Daytona.....	25	..	..	..	No
Brewster Hospital.....	Jacksonville...	32	2	14	5	Yes
Riverside Hosp., Inc...	Jacksonville...	35	4	25	2	Yes
St. Luke's Hosp. Assn..	Jacksonville...	171	2	43	14	Yes
St. Vincent's Hospital.	Jacksonville...	64	2	27	10	Yes
Morrell Mem. Hosp.....	Lakeland.....	90	2	12	4	Yes
James M. Jackson Memorial Hospital.....	Miami.....	300	2	50	8	Yes
Marion Gen. Hosp.....	Ocala.....	35	..	..	..	Yes†
Florida Sanitarium & Benevolent Assn.....	Orlando.....	135	2	73	5	Yes
Orange General Hosp..	Orlando.....	106	2	39	6	Yes
Pensacola Hospital....	Pensacola.....	100	2	32	10	Yes
Gadsden County Hospital, Inc.....	Quincy.....	26	1	6	..	No
Sarasota Hospital.....	Sarasota.....	40	2	8	New	No
East Coast Hospital...	St. Augustine..	115	2	27	7	Yes
Flagler Hospital.....	St. Augustine..	100	2	9	2	Yes
Faith Hospital, Inc....	St. Petersburg.	40	2	13	1	Yes†
Mound Park Hospital.	St. Petersburg.	60	2	13	2	Yes
Florida Agricultural & Mechanical College Sanitarium [1]	Tallahassee....	25	2	10	3	No
Bayside Hosp., Inc.....	Tampa.....	40	2	16	6	Yes
Clara Frye Hospital [1].	Tampa.....	75	..	..	..	No
Gordan Keller Memorial Hospital.....	Tampa.....	130	2	28	..	Yes
Good Samaritan Hosp.	W. Palm Beach	200	4	9	New	No
GEORGIA						
Phoebe Putney Memorial Hospital.....	Albany.....	50	4	12	4	Yes
Americus and Sumter County Hospital.....	Americus.....	30	4	24	3	Yes†
Athens Gen. Hosp., Inc.	Athens.....	93	3	21	5	Yes
St. Mary's Hosp., Inc..	Athens.....	50	2	14	4	Yes†
Atlanta Hospital.....	Atlanta.....	25	2	17	3	Yes
Battle Hill Sanat.....	Atlanta.....	177	1	10	5	No
Dr. Brawner's Sanit....	Atlanta.....	40	4	9	2	No
Davis-Fischer Sanat....	Atlanta.....	160	2	53	..	Yes
Georgia Baptist Hosp.	Atlanta.....	215	4	64	14	Yes
Grady Memorial Hosp..	Atlanta.....	200	2	58	12	Yes
Grady Memorial Hosp.[1]	Atlanta.....	225	2	52	17	Yes
MacVicar Hospital of Spelman College [1]...	Atlanta.....	45	2	23	1	Yes†
Mercy Hospital, Inc.[1]..	Atlanta.....	30	..	..	..	No
Dr. Noble's Private Inf.	Atlanta.....	25	4	8	2	No
Piedmont Hospital....	Atlanta.....	121	4	55	11	Yes
St. Joseph Infirmary...	Atlanta.....	125	4	40	11	Yes
Margaret Wright Hosp.	Augusta.....	20	2	14	3	Yes†
University Hospital....	Augusta.....	261	4	93	22	Yes
Wilhenford Hospital for Women and Children	Augusta.....	50	4	16	2	Yes†
Riverside Hospital.....	Bainbridge.....	24	..	..	..	No
Brunswick City Hosp..	Brunswick.....	50	2	7	2	Yes
Coker's Hospital.....	Canton.....	23	2	6	..	Yes†
Hall-Chaudron Hosp...	Cedartown.....	10	2	7	New	Yes†
Columbus City Hosp...	Columbus.....	125	gr. sch.	23	3	Yes
Cordele Sanatorium....	Cordele.....	12	..	3	2	No
Patterson Hospital.....	Cuthbert.....	21	2	9	..	No
Hamilton Mem. Hosp.	Dalton.....	35	4	8	4	Yes†
Clark and Smith Sanit.	Douglas.....	14	1	8	3	Yes†
Dublin Clinic	Dublin.....	30	..	..	..	Yes†
Wesley Mem. Hosp.....	Emory.....	300	4	70	19	Yes
Fitzgerald Hospital....	Fitzgerald.....	35	2	15	3	Yes†
Downey Hospital, Inc..	Gainesville.....	52	2	14	4	Yes
Griffin Hosptial.....	Griffin.....	50	4	12	4	Yes†
Drs. Colvin and Riteh Sanatorium	Jesup.....	17	2	7	..	No
Dunson Hospital	LaGrange.....	40	3	11	7	Yes†
Macon Hospital.....	Macon.....	125	2	47	15	Yes
Middle Georgia Sanat..	Macon.....	50	4	27	5	Yes
Oglethorpe Private Infirmary	Macon.....	22	2	13	2	Yes†
Georgia State Sanit.[3].	Milledgeville...	4,600	3	38	9	Yes†
Wise Sanitarium, Inc..	Plains.....	60	4	19	7	Yes†
Frances Berrien Hosp..	Rome.....	30	..	..	..	Yes†
Harbin Hospital.....	Rome.....	75	2	21	1	Yes†
Rawling's Sanitarium..	Sandersville....	100	4	18	5	Yes
Charity Hospital [1].....	Savannah.....	42	4	11	2	No
Georgia Infirmary [1]....	Savannah.....	80	3	30	5	No
Oglethorpe Sanatorium	Savannah.....	50	4	22	6	Yes
Savannah Hospital....	Savannah.....	70	2	32	3	Yes
St. Joseph's Hospital..	Savannah.....	125	2	30	4	Yes
Telfair Hospital.....	Savannah.....	52	2	18	5	Yes†
Van Buren's Sanit.[1]...	Statesboro.....	12	4	8	2	No
John D. Archbold Memorial Hospital.....	Thomasville...	62	4	26	3	Yes
John D. Archbold Memorial Hospital [1]....	Thomasville...	32	4	9	..	Yes
Little-Griffin Private Hospital	Valdosta.....	41	2	15	6	Yes
Vidalia Hospital.....	Vidalia.....	25	2	10	3	Yes
King's Daughters' Hospital	Waycross.....	35	4	12	3	Yes
IDAHO						
St. Alphonsus Hosp....	Boise.....	125	2	36	7	Yes
St. Luke's Hospital....	Boise.....	53	4	32	8	Yes
Idaho Falls Latter-Day Saints Hospital.....	Idaho Falls....	100	2	36	7	Yes
Spencer Hosp., Inc.....	Idaho Falls....	40	2	6	3	Yes
St. Joseph's Hospital..	Lewiston.....	90	2	29	4	Yes
White Hospital.....	Lewiston.....	30	2	8	2	Yes

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
Mercy Hosp. (Nampa General Hospital)	Nampa	35	2	12	1	Yes
Nazarene Missionary Sanitarium	Nampa	25	2	6	..	No
Pocatello Gen. Hosp.	Pocatello	54	3	12	..	Yes
St. Anthony's Mercy Hospital	Pocatello	50	2	12	2	Yes
ILLINOIS						
Alton State Hospital [3]	Alton	1,259	2	23	3	Yes
St. Joseph's Hospital	Alton	75	1	23	5	Yes
Anna State Hospital [3]	Anna	1,829	1	9	3	Yes
Hale-Willard Memorial Hospital	Anna	30	1	6	..	No
Augusta Hospital	Augusta	25	4	12	3	No
Aurora Hospital Assn.	Aurora	67	1	31	2	Yes
St. Charles Hospital	Aurora	100	1	30	9	Yes
St. Joseph s Hospital	Aurora	50	1	22	3	Yes
Brokaw Hospital	Bloomington	75	4	37	6	Yes
Mennonite Sanitarium	Bloomington	65	2	33	..	Yes
St. Joseph's Hospital	Bloomington	225	2	30	5	Yes
St. Mary's Hospital	Cairo	120	1	25	6	Yes
Graham Hospital	Canton	50	1	25	6	Yes
Holden Hospital	Carbondale	50	1	14	1	Yes
Burnham City Hospital	Champaign	65	2	38	8	Yes
M. A. Montgomery Memorial Sanatorium	Charleston	25	2	9	..	Yes
Alexian Brothers Hosp.	Chicago	280	1	39	6	Yes
American Hospital	Chicago	140	1	66	13	Yes
Auburn Park Hospital	Chicago	30	1	14	6	No
Augustana Hospital	Chicago	246	2	186	40	Yes
Bethany Sanitarium & Hospital	Chicago	14	1	6	..	No
Burnside Hospital	Chicago	50	1	14	6	Yes
Chicago General Hosp.	Chicago	52	1	20	..	Yes
Chicago Hospital Co.	Chicago	50	1	38	13	Yes
Chicago Matern. Hosp.	Chicago	5	gr. sch.	..	3	No
Columbus Hospital	Chicago	165	1	39	44	Yes
Englewood Hospital	Chicago	150	..	70	..	Yes
Evangelical Deaconess Hospital	Chicago	32	1	26	12	Yes
Evangelical Hospital of Chicago	Chicago	150	2	45	8	Yes
Frances E. Willard Hospital	Chicago	125	1	44	10	Yes
Franklin Blvd. Hosp.	Chicago	65	1	24	9	Yes
Garfield Park Hospital, Inc.	Chicago	82	1	48	19	Yes
Grant Hosp. of Chicago	Chicago	140	4	90	27	Yes
Henrotin Hospital	Chicago	75	1	57	15	Yes
Hosp. of St. Anthony de Padua	Chicago	189	1	44	10	Yes
Illinois Masonic Hosp.	Chicago	150	1	35	9	Yes
Illinois Training School for Nurses, Cook County Hospital	Chicago	2,500	4	127	4	Yes
Jackson Park Hospital	Chicago	115	1	73	12	Yes
Jefferson Park Hosp.	Chicago	75	1	40	14	Yes
John B. Murphy Hosp.	Chicago	101	2	35	10	Yes
Lakeside Hospital	Chicago	200	1	45	23	Yes
Lake View Hospital	Chicago	50	3	44	8	Yes
Lutheran Deaconess Home and Hospital	Chicago	200	4	8	..	Yes
Lutheran Mem. Hosp.	Chicago	175	4	31	5	Yes
Mercy Hospital	Chicago	400	4	161	42	Yes
Michael Reese Hospital	Chicago	435	4	216	58	Yes
Mother Cabrini Memorial Hospital	Chicago	150	1	33	9	Yes
Mt. Sinai Hospital	Chicago	85	4	35	13	Yes
North Chicago Hosp.	Chicago	90	2	33	6	Yes
Norwegian-American Hospital	Chicago	150	4	50	7	Yes
Post Graduate Hospital and Medical School	Chicago	85	1	24	9	Yes
Presybterian Hospital	Chicago	425	4	229	55	Yes
Provident Hospital	Chicago	59	4	32	10	Yes
Pullman Emerg. Hosp.	Chicago	24	4	5	..	No
Ravenswood Hospital	Chicago	190	4	75	11	Yes
Robert Burns Hospital	Chicago	40	1	15	..	Yes
Roseland Com. Hosp.	Chicago	101	1	23	2	Yes
South Chicago Community Hospital	Chicago	44	1	17	5	Yes
South Shore Hospital	Chicago	125	1	54	11	Yes
St. Anne's Hospital	Chicago	100	1	49	16	Yes
St. Bernard's Hospital	Chicago	200	4	67	23	Yes
St. Elizabeth's Hosp.	Chicago	225	4	79	19	Yes
St. Joseph's Hospital	Chicago	205	4	82	17	Yes
St. Luke's Hospital	Chicago	743	4	210	50	Yes
St. Mary of Nazareth Hospital	Chicago	215	4	74	10	Yes
St. Paul's Hospital	Chicago	22	1	15	..	No
Swedish Covenant Hospital and Home of Mercy	Chicago	115	1	50	12	Yes
University Hospital	Chicago	130	1	29	7	Yes
Washington Boulevard Hospital	Chicago	90	4	40	9	Yes
Washington Park Hospital	Chicago	150	1	59	29	Yes
Wesley Mem. Hosp.	Chicago	250	4	114	40	Yes
West Side Hospital	Chicago	163	1	80	24	Yes
Women's and Children's Hospital of Chicago	Chicago	100	1	9	4	Yes
Lake View Hospital	Danville	112	2	61	11	Yes
St. Elizabeth's Hosp.	Danville	125	1	37	9	Yes
Decatur and Macon County Hospital	Decatur	130	4	76	15	Yes
Macon County Tuberculosis Sanatorium	Decatur	40	4	75	15	No
Dixon Public Hospital	Dixon	35	1	15	4	Yes
Watertown State Hosp. [3]	East Moline	1,800	1	8	1	Yes
St. Mary's Hospital	East St. Louis	110	1	60	7	Yes
Elgin State Hospital [3]	Elgin	2,380	1	..	..	Yes
Lakeview Sanatorium	Elgin	15	..	3	..	No
Sherman Hospital	Elgin	85	4	26	8	Yes
St. Joseph's Hospital	Elgin	60	1	21	6	Yes
Evanston Hospital	Evanston	213	4	113	..	Yes
St. Francis Hospital	Evanston	150	2	46	5	Yes
Evangelical Deaconess Hospital	Freeport	35	1	22	..	Yes
Freeport General Hosp.	Freeport	35	2	17	3	Yes
St. Francis Hospital	Freeport	125	1	24	6	Yes
Galesburg Cottage Hospital	Galesburg	79	4	9	2	Yes
Community Hospital	Geneva	75	4	10	..	Yes
St. Elizabeth's Hosp.	Granite City	60	4	25	8	Yes
Ingalls Memorial Hosp.	Harvey	50	2	11	New	Yes
Hinsdale Sanitarium & Benevolent Assn.	Hinsdale	150	4	97	26	Yes
Jacksonville State Hospital [3]	Jacksonville	2,875	1	28	..	Yes
Our Savior's Hospital	Jacksonville	90	2	26	6	Yes
Passavant Mem. Hosp.	Jacksonville	80	4	23	9	Yes
Silver Cross Hospital	Joliet	94	2	36	3	Yes
St. Joseph's Hospital	Joliet	160	1	46	6	Yes
Kankakee State Hosp. [3]	Kankakee	3,200	1	36	4	Yes
St. Mary's Hospital	Kankakee	88	1	16	5	Yes
Kewanee Public Hosp.	Kewanee	53	2	14	8	Yes
St. Francis Hospital	Kewanee	55	1	19	3	Yes
St. Mary's Hospital	La Salle	80	2	28	7	Yes
Evangelical Deaconess Hospital	Lincoln	60	1	5	..	Yes
Lincoln State School & Colony [3]	Lincoln	904	1	11	..	Yes
Holmes Hospital	Macomb	50	4	26	13	No
Marietta Phelps Hosp.	Macomb	30	4	13	2	Yes
Memorial Methodist Hospital	Mattoon	40	4	14	2	Yes
Lutheran Hospital	Moline	63	4	32	11	Yes
Moline City Hospital	Moline	100	3	30	4	Yes
Monmouth Hospital	Monmouth	33	1	23	4	Yes
Morris Hospital	Morris	20	gr. sch.	6	..	No
Oak Park Hospital	Oak Park	135	2	58	15	Yes
West Suburban Hosp.	Oak Park	400	4	133	29	Yes
Olney Sanitaruim	Olney	75	1	26	11	Yes
Illinois Valley Hosp.	Ottawa	20	2	12	..	Yes
Ottawa Tuber. Sanat. [3]	Ottawa	50	2	14	..	No
Ryburn Mem. Hosp.	Ottawa	52	1	20	4	Yes
Huber Memorial Hospital of the Sisters of Misericorde	Pana	43	1	18	..	Yes
Little Sanitarium	Pana	30	1	9	..	No
Paris Hospital	Paris	25	1	9	5	Yes
Pekin Public Hospital	Pekin	30	1	8	2	Yes
John C. Proctor Hosp.	Peoria	118	1	43	15	Yes
Methodist Hospital of Central Illinois	Peoria	210	2	65	15	Yes
Peoria State Hospital	Peoria	2,700	1	28	4	Yes
St. Francis' Hospital	Peoria	225	2	70	21	Yes
People's Hospital	Peru	40	2	18	4	Yes
Blessing Hospital	Quincy	100	1	34	10	Yes
Rockford Hospital	Rockford	88	2	44	10	Yes
St. Anthony's Hospital	Rockford	125	1	41	14	Yes
Swedish-Amer. Hosp.	Rockford	64	2	44	10	Yes
St. Anthony's Hosp.	Rock Island	150	4	45	8	Yes
Springfield Hospital	Springfield	100	1	45	6	Yes
St. John's Hospital	Springfield	500	2	164	35	Yes
St. Margaret's Hosp.	Springvalley	65	1	7	3	Yes
Public Hospital	Sterling	35	1	13	3	No
Iroquois Hospital	Watseka	27	1	5	3	Yes
Victory Mem. Hosp.	Waukegan	75	2	32	..	Yes
INDIANA						
St. John's Hospital	Anderson	100	1	15	2	Yes
Bloomington Hospital	Bloomington	35	4	15	4	Yes
Elkhart General Hosp.	Elkhart	60	4	31	6	Yes
Hayden Hospital	Evansville	40	1	23	4	Yes
Protestant Deaconess Hospital	Evansville	120	1	42	11	Yes
St. Mary's Hospital	Evansville	115	1	38	9	Yes
Walker Hospital	Evansville	75	1	47	13	Yes
Ft. Wayne Lutheran Hospital	Ft. Wayne	115	2	79	19	Yes
Methodist Epis. Hosp.	Ft. Wayne	109	1	49	..	Yes
St. Joseph's Hospital	Ft. Wayne	200	4	46	8	Yes
Methodist Epis. Hosp.	Gary	100	1	29	14	Yes
St. Mary's Mercy Hosp.	Gary	125	1	38	5	Yes
Goshen Hospital	Goshen	38	1	9	4	Yes
St. Margaret's Hosp.	Hammond	250	2	36	2	Yes
Huntington Co. Hosp.	Huntington	25	4	10	4	Yes
Indiana Christ. Hosp.	Indianapolis	120	1	50	6	Yes
Indiana University Training School for Nurses [7]	Indianapolis	254	4	150	17	Yes
Indianapolis City Hosp.	Indianapolis	625	2	110	24	Yes
Methodist Epis. Hosp.	Indianapolis	350	2	199	48	Yes
Neuronhurst, Dr. W. B.						
Fletcher's Sanatorium [3]	Indianapolis	50	1	21	4	Yes
Provident Sanitarium [1]	Indianapolis	30	2	3	0	No
St. Vincent's Hosp.	Indianapolis	223	1	110	22	Yes
Lafayette Home Hosp.	Lafayette	80	4	39	6	Yes
St. Elizabeth's Hosp. [2]	Lafayette	250	..	..	..	Yes
Wabash Valley Sanitarium and Hospital	Lafayette	50	4	9	4	Yes
Williams Hospital	Lebanon	30	1	6	..	No
Grant County Hospital	Marion	45	1	20	2	Yes

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
St. Joseph's Hospital.	Mishawaka....	78	1	21	5	Yes
Muncie Home Hospital	Muncie.....	62	4	33	4	Yes
Reid Memorial Hosp..	Richmond.....	63	4	26	2	Yes
Epworth Hospital.....	South Bend....	150	4	63	4	Yes
St. Joseph's Hospital.	South Bend....	125	1	32	6	Yes
St. Anthony's Hospital	Terre Haute...	170	2	47	9	Yes
Union Hospital.....	Terre Haute...	175	4	67	18	Yes
Good Samaritan Hosp.	Vincennes.....	94	4	22	5	Yes
IOWA						
Miner's Hospital.....	Albia.....	40	2	11	1	Yes
Algona Hospital.....	Algona.....	12	1	4	2	No
Mercy Hospital.....	Anamosa.....	40	4	17	5	Yes
Atlantic Hospital.....	Atlantic.....	39	4	13	3	Yes
Burlington Prot. Hosp.	Burlington.....	100	4	53	11	Yes
Mercy Hospital.....	Burlington.....	50	2	18	3	Yes
St. Anthony's Hospital	Carroll.....	100	2	29	15	Yes
Mercy Hospital.....	Cedar Rapids..	200	4	62	14	Yes
St. Luke's Methodist Hospital	Cedar Rapids..	175	4	54	25	Yes
St. Joseph Hospital...	Centerville.....	50	2	9	4	Yes
Cherokee State Hosp.[3]	Cherokee.....	1,250	..	9	..	No
Sioux Valley Hospital.	Cherokee.....	35	4	12	3	Yes
Clarinda State Hosp...	Clarinda.....	1,300	gr. sch.	8	4	No
Jane Lamb Memorial Hospital	Clinton.....	100	2	24	5	Yes
St. Joseph's Mercy Hospital	Clinton.....	60	2	32	7	Yes
Jennie Edmundson Memorial Hospital.....	Council Bluffs.	110	4	54	17	Yes
Mercy Hospital.....	Council Bluffs.	100	2	39	11	Yes
St. Joseph's Mercy Hospital	Cresco.....	31	2	7	2	Yes
Great Commun'y Hosp.	Creston.....	50	4	22	..	Yes
Mercy Hospital.....	Davenport.....	125	2	48	10	Yes
St. Luke's Hospital...	Davenport.....	63	2	35	8	Yes
Broadlawn Polk County Public Hospital...	Des Moines.....	85	4	27	2	Yes
Iowa Lutheran Hosp.	Des Moines.....	150	4	100	24	Yes
Iowa Methodist Hosp.	Des Moines.....	242	4	114	44	Yes
Mercy Hospital.....	Des Moines.....	142	2	72	22	Yes
Finley Hospital.....	Dubuque.....	100	1	38	10	Yes
St. Joseph's Mercy Hospital	Dubuque.....	125	2	66	15	Yes
Coleman Hospital.....	Estherville.....	60	4	20	..	Yes
Jefferson County Hosp.	Fairfield.....	35	2	16	3	Yes
St. Joseph's Mercy Hospital	Ft. Dodge.....	112	2	44	14	Yes
Grinnell Community Hospital	Grinnell.....	53	4	9	2	Yes
Independence State Hospital	Independence..	1,417	gr. sch.	23	2	No
Mercy Hospital.....	Iowa City.....	125	4	43	10	Yes
University Hospital....	Iowa City.....	724	4	265	60	Yes
W. C. Graham Protestant Hospital.....	Keokuk.....	40	2	14	1	Yes
St. Joseph's Hospital.	Keokuk.....	75	2	27	10	Yes
Sacred Heart Hospital	Le Mars.....	90	2	17	5	Yes
Mineral Springs Hospital and Sanitarium Association	Marengo.....	15	gr. sch.	10	3	No
Evangelical Deaconess Home & Hospital..	Marshalltown..	125	2	29	11	Yes
Mercy Hospital.....	Marshalltown..	75	4	20	6	Yes
Park Hospital.....	Mason City....	50	4	23	7	Yes
St. Joseph's Mercy Hospital	Mason City....	70	2	38	11	Yes
Story Hospital.....	Mason City....	13	gr. sch.	3	2	No
John McDonald Hosp.	Monticello.....	28	2	11	5	Yes
Mt. Pleasant State Hospital	Mt. Pleasant...	1,300	gr. sch.	25	3	No
Bellevue Hospital.....	Muscatine.....	35	2	7	4	Yes
Benjamin Hershey Memorial Hospital.....	Muscatine.....	50	2	15	4	Yes
Mahaska Hospital....	Oskaloosa.....	25	2	21	6	Yes
Mercy Hospital.....	Oskaloosa.....	40	2	15	2	Yes
Ottumwa Hospital....	Ottumwa.....	53	4	28	5	Yes
St. Joseph Hospital....	Ottumwa.....	100	2	29	10	Yes
Henry and Catherine Hand Hospital.....	Shenandoah...	26	1	6	..	No
Lutheran Hospital.....	Sioux City.....	85	2	40	4	Yes
Methodist Hospital....	Sioux City.....	130	4	58	10	Yes
Sioux City Mat. Hosp.	Sioux City.....	24	2	13	8	No
St. Joseph's Mercy Hospital	Sioux City.....	225	2	88	14	Yes
St. Vincent's Hospital.	Sioux City.....	125	2	38	9	Yes
Washington County Hospital	Washington....	30	4	10	3	Yes
Allen Memorial Hosp...	Waterloo.....	91	2	21	..	Yes
Synodical Presbyterian Hospital	Waterloo.....	50	2	21	7	Yes
St. Joseph's Mercy Hospital	Waverly.....	50	2	23	2	Yes
KANSAS						
Mercy Hospital.....	Arkansas City.	40	1	11	3	Yes
R. G. Patterson Memorial Hospital	Belleville.....	22	4	10	..	Yes†
Bonner Springs Sanit..	Bonner Springs	25	4	3	3	No
Johnson Hospital.....	Chanute.....	39	4	19	4	Yes
South East Kansas Hospital	Coffeyville.....	26	1	9	5	Yes
Concordia Hospital....	Concordia.....	40	1	10	2	Yes
St. Joseph's Hosp.....	Concordia.....	75	1	22	7	Yes
St. Anthony's Hosp...	Dodge City....	20	2	16	1	Yes
St. Luke's Hosp. Cor..	Eldorado.....	50	1	9	2	Yes
Ellsworth Hospital.....	Ellsworth.....	40	4	13	4	Yes
Newman Memorial County Hospital.....	Emporia.....	65	4	33	5	Yes
Ft. Scott Hosp., Cor..	Ft. Scott.....	50	4	20	8	Yes
Mercy Hospital.....	Ft. Scott.....	45	1	16	3	Yes
Bethesda Hospital.....	Goessel.....	30	1	..	1	Yes†
Goodland Methodist Hospital	Goodland.....	15	1	8	1	Yes
St. Rose Hospital.....	Great Bend....	50	1	16	6	Yes
Halstead Hospital.....	Halstead.....	100	1	52	12	Yes
Hays Protestant Hosp.	Hays.....	35	4	9	3	Yes
Salem Home & Hosp..	Hillsboro.....	35	1	5	3	Yes†
Grace Methodist Hosp.	Hutchinson....	94	4	38	9	Yes
St. Elizabeth's Mercy Hospital	Hutchinson....	75	1	14	2	Yes
Johnson Hosp. Clinic..	Independence..	50	1	7	1	Yes
West Side Hosp. Assn.	Independence..	35	1	11	..	Yes
Junction City Municipal Hospital.....	Junction City..	30	1	2	..	Yes
Bell Memorial Hospital	Kansas City...	120	4	42	7	Yes
Bethany Methodist Hospital	Kansas City...	120	4	77	18	Yes
Providence Hospital...	Kansas City...	65	1	28	5	Yes
St. Margaret's Hosp..	Kansas City...	400	gr. sch.	16	6	No
Kingman Hospital.....	Kingman.....	12	1	5	..	Yes
Larned Hosp. Assn....	Larned.....	20	1	2	1	Yes
Haskell Institute Hospital School.....	Lawrence.....	54	2	38	15	No
Lawrence Hospital	Lawrence.....	30	2	2	1	Yes
McConnell Hospital....	Lawrence.....	25	4	6	2	Yes
Cushing Hospital.....	Leavenworth..	20	1	9	2	Yes
Epworth Hospital.....	Liberal.....	50	1	13	..	Yes
Hoffman Mem. Hosp..	Little River....	15	4	6	..	Yes†
Charlottie Swift Memorial Hospital.....	Manhattan....	20	4	13	1	Yes
Park View Hosp. Co.	Manhattan....	30	4	6	2	Yes
Wilson County Hosp..	Neodesha.....	45	1	6	2	Yes
Axtell Christian Hosp.	Newton.....	50	4	25	2	Yes
Bethel Deaconess Home and Hospital.....	Newton.....	45	1	21	6	Yes
Norton Method't Hosp.	Norton.....	31	1	9	3	Yes
Mercy Hospital.....	Parsons.....	50	..	..	..	Yes
C. T. Wood's Memorial Hospital	Parsons.....	15	..	..	..	Yes
Mt. Carmel Hospital...	Pittsburg.....	75	1	22	6	Yes
Ninnescah Hosp. Assn.	Pratt.....	22	4	8	1	Yes
Asbury Prot. Hosp....	Salina.....	27	4	15	5	Yes
St. John's Hospital....	Salina.....	65	1	17	..	Yes
Sterling Hosp. Assn....	Sterling.....	20	1	3	1	Yes
Christ's Hospital.....	Topeka.....	52	1	47	..	Yes
Jane C. Stormont Hospital	Topeka.....	48	4	29	6	Yes
Nellie Johns Memorial Hospital	Topeka.....	20	4	5	..	No
St. Francis' Hospital..	Topeka.....	75	1	36	5	Yes
Kansas Sanit. & Hosp.	Wichita.....	60	4	31	8	Yes
St. Francis' Hospital.	Wichita.....	220	1	76	15	Yes
Wesley Hospital.....	Wichita.....	215	4	90	25	Yes
Wichita Hospital.....	Wichita.....	135	1	48	8	Yes
St. Mary's Hospital...	Winfield.....	50	1	10	5	Yes
KENTUCKY						
Bapt. Gen. Hosp., Inc.	Ashland.....	66	1	22	1	Yes
King's Daugh'rs' Hosp.	Ashland.....	42	1	14	2	Yes
Berea College Hosp....	Berea.....	50	1	15	5	Yes
Bowling Green City Hospital	Bowling Green.	47	..	..	..	Yes
Booth Memorial Hosp.	Covington.....	100	1	29	3	Yes
St. Elizabeth's Hosp...	Covington.....	300	gr. sch.	17	2	No
Harrison Mem. Hosp...	Cynthiana.....	40	2	9	2	Yes
Speer's Memorial Hosp.	Dayton.....	100	1	24	8	Yes
Southern Ky. Sanat....	Franklin.....	50	1	9	3	Yes
Henderson Hosp., Inc..	Henderson.....	25	1	6	..	Yes
Moseley Hospital, Inc..	Henderson.....	25	1	10	2	Yes
Jennie Stuart Memorial Hospital	Hopkinsville...	27	1	13	4	Yes
Elizabeth's Hospital...	Lebanon.....	16	4	4	..	Yes
Good Samaritan Hosp.	Lexington.....	125	2	42	12	Yes
Jewish Hospital.....	Louisville.....	54	1	24	6	Yes
John N. Norton Memorial Infirmary.....	Louisville.....	100	2	39	10	Yes
Kentucky Bapt. Hosp..	Louisville.....	150	4	48	..	Yes
Louisville City Hosp..	Louisville.....	400	2	75	14	Yes
Methodist Episcopal Deaconess Hosp.....	Louisville.....	76	1	37	5	Yes
Red Cross Hospital....	Louisville.....	40	1	11	4	Yes
St. Anthony's Hospital	Louisville.....	209	2	30	4	Yes
St. Joseph's Infirmary.	Louisville.....	100	1	55	14	Yes
SS. Mary and Elizabeth Hospital	Louisville.....	145	1	40	10	Yes
William H. Emrich Hospital	Louisville.....	14	1	3	2	No
Mayfield Hospital, Inc..	Mayfield.....	30	1	12	2	Yes
Brosheer - Brummett Hospital	Middlesboro...	50	1	9	2	Yes

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
Wm. Mason Memorial Hospital	Murray	72	4	44	9	Yes
Owensboro City Hosp.	Owensboro	110	1	24	4	Yes
Riverside Hospital	Paducah	100	4	25	2	Yes
Paintsville Hosp. Co.	Paintsville	30	4	8	1	Yes
Massie Memorial Hosp.	Paris	48	1	13	1	Yes
Pulaski Co. Hosp., Inc.	Somerset	18	gr. sch.	4	..	No
LOUISIANA						
Baptist Hospital	Alexandria	60	1	25	5	Yes
Baton Rouge General Hospital, Inc.	Baton Rouge	30	4	5	1	Yes
Our Lady of the Lake Sanitarium	Baton Rouge	100	4	36	10	Yes
Elizabeth Sullivan Memorial Hospital	Bogalusa	96	2	32	10	Yes
St. Patrick Sanitarium	Lake Charles	75	2	25	6	Yes
Riverside Sanit., Inc.	Monroe	50	2	18	1	Yes
St. Francis' Sanitarium	Monroe	125	4	31	5	Yes
Charity Hosp. of La.	New Orleans	1,300	2	127	38	Yes
Flint-Goodrich Hosp.	New Orleans	51	2	23	6	Yes
Hotel Dieu Hospital	New Orleans	269	2	142	28	Yes
Mercy Hospital, Soniat Memorial	New Orleans	64	2	32	1	Yes
New Orleans Hospital and Dispensary for Women and Children	New Orleans	35	gr. sch.	14	3	No
Presbyterian Hospital of New Orleans	New Orleans	100	2	35	5	Yes
Southern Bapt. Hosp.	New Orleans	218	4	58	New	Yes
Touro Infirmary	New Orleans	366	2	153	25	Yes
St. Mary's Hospital	Patterson	30	2	21	6	Yes
Highland Sanit., Inc.	Shreveport	85	2	45	13	Yes
North Louisiana Sanit.	Shreveport	100	4	31	4	Yes
T. E. Schumpert Memorial Sanitarium	Shreveport	200	4	50	14	Yes
Shreveport Char. Hosp.	Shreveport	250	4	46	11	Yes
Tri-State Sanitarium	Shreveport	75	4	17	2	Yes
MAINE						
Augusta General Hosp.	Augusta	100	2	26	3	Yes
Augusta State Hosp.[3]	Augusta	1,200	4	11	..	Yes
Bangor State Hosp.[3]	Bangor	780	2	21	4	Yes
Eastern Maine General Hospital	Bangor	130	4	61	13	Yes
Paine Private Hospital	Bangor	22	4	9	2	Yes
Bath City Hospital	Bath	50	2	16	5	Yes
Bradbury Mem. Hosp.	Belfast	21	4	3	..	Yes
Waldo County General Hospital	Belfast	18	4	10	4	Yes
Trull Hospital, Inc.	Biddeford	40	2	17	1	Yes
Webber Hospital	Biddeford	50	2	13	1	Yes
Cary Memorial Hosp.	Caribou	44	2	12	New	Yes
Calias Hospital	Calais	52	2	27	8	Yes
Plummer Mem. Hosp.	Dexter	20	4	11	3	Yes
Community Hospital	Ft. Fairfield	20	4	8	1	No
Gardiner Gen. Hosp.	Gardiner	23	2	5	2	Yes
Charles A. Dean Hosp.	Greenville Junction	23	2	4	1	Yes
Aroostock Hospital	Houlton	35	2	21	2	Yes
Madigan Mem. Hosp.	Houlton	50	2	17	5	Yes
Central Maine General Hospital	Lewiston	110	2	42	11	Yes
St. Mary's Gen. Hosp.	Lewiston	110	2	32	14	Yes
Children's Hospital[3]	Portland	70	2	28	5	Yes
Dr. Leighton's Private Maternity Hospital	Portland	14	4	6	4	No
Maine Eye & Ear Infirmary	Portland	90	2	60	17	Yes
Maine General Hosp.	Portland	160	4	52	21	Yes
Queen's Hospital	Portland	60	2	6	1	Yes
St. Barnabas Hospital	Portland	75	4	45	10	Yes
State Street Hospital	Portland	50	2	32	9	Yes
Presque Isle General Hospital	Presque Isle	50	2	19	5	Yes
Knox County General Hospital	Rockland	38	2	15	4	Yes
Rumford Com. Hosp.	Rumford	84	2	16	..	Yes
Kennebec Valley Hosp.	Skowhegan	30	4	8	2	Yes
Elm City Hospital	Waterville	20	2	6	1	Yes
Sisters Hospital	Waterville	100	2	33	3	Yes
St. Andrew's Hospital	West Boothbay Harbor	17	2	5	..	No
MARYLAND						
Annapolis Emergency Hospital	Annapolis	42	4	11	2	Yes
Bon Secours Hosp.	Baltimore	67	4	5	13	Yes
Church Home and Infirmary of the City of Baltimore	Baltimore	157	4	72	17	Yes
Colonial Hospital	Baltimore	78	1	14	8	Yes
Franklin Square Hosp.	Baltimore	110	4	25	5	Yes
Hospital for Women of Maryland	Baltimore	100	4	63	13	Yes
Johns Hopkins Hosp.	Baltimore	723	4	219	69	Yes
Maryland Gen. Hosp.	Baltimore	198	4	70	18	Yes
Mercy Hospital	Baltimore	255	4	105	28	Yes
Provident Hospital and Free Dispensary[1]	Baltimore	35	4	10	..	Yes
Sinai Hospital of Baltimore	Baltimore	275	2	67	10	Yes
South Baltimore General Hospital	Baltimore	60	4	25	6	Yes
St. Anges' Hospital	Baltimore	185	1	52	15	Yes
St. Joseph's Hospital	Baltimore	250	4	60	11	Yes
Union Memorial Hosp.	Baltimore	149	4	72	32	Yes
University of Maryland Hospital	Baltimore	250	4	87	17	Yes
West Baltimore General Hospital	Baltimore	165	4	26	3	Yes
Cambridge - Maryland Hospital	Cambridge	75	4	20	4	Yes
Edward W. McCready Memorial Hospital	Crisfield	34	gr. sch.	13	2	Yes
Crownsville State Hosp.[3]	Crownsville	700	1	5	..	Yes
Allegany Hospital of the Sisters of Charity	Cumberland	100	4	36	9	Yes
West. Maryland Hosp.	Cumberland	75	4	30	7	Yes
Easton Emerg. Hosp.	Easton	50	4	19	3	Yes
Union Hospital of Cecil County, Inc.	Elkton	45	4	14	3	Yes
Frederick City Hosp.	Frederick	80	4	16	6	Yes
Washington Co. Hosp.	Hagerstown	106	4	18	13	Yes
Peninsular Gen. Hosp.	Salisbury	94	4	33	6	Yes
Maryland Tuberculosis Sanatorium	State Sanator.	442	4	28	9	No
Springfield State Hosp.	Sykesville	1,850	gr. sch.	16	13	No
Hospital for Consumptives of Maryland[3]	Townson	130	gr. sch.	10	2	No
Sheppard and Enoch Pratt Hospital[3]	Townson	165	4	7	6	Yes
MASSACHUSETTS						
Ring Sanatorium and Hospital, Inc.[3]	Arlington	60	4	31	13	No
Symmes Arlington Hospital	Arlington	41	1	27	8	Yes
Dr. Young's Hospital	Arlington	15	..	..	..	No
Sturdy Memorial Hosp.	Attleboro	54	1	21	9	Yes
McLean Hospital[3]	Belmont	230	1	104	23	Yes
Beverly Hosp. Cor.	Beverly	100	2	41	9	Yes
Bay State Hosp., Inc.	Boston	21	2	11	10	No
Beth Israel Hospital	Boston	50	4	44	2	Yes
Boston City Hospital	Boston	806	2	120	35	Yes
Boston Lying-in Hosp.[3]	Boston	100	4	..	211	No
Boston State Hosp.[3]	Boston	2,120	1	..	..	No
Carney Hospital	Boston	200	4	88	12	Yes
Children's Hospital[3]	Boston	277	4	107	32	Yes
Codman Square Hosp.	Boston	20	..	..	..	No
Emerson Hosp., Inc.	Boston	60	2	21	11	Yes
Faulkner Hospital	Boston	54	2	60	14	Yes
Fenway Hospital	Boston	38	1	21	7	Yes
Forsyth Dental Infirmary for Children[6]	Boston	12	4	41	63	No
Harley Private Hospital, Inc.	Boston	62	1	23	7	Yes
Hart Private Hosp.	Boston	50	1	24	2	Yes
Mass. General Hosp.	Boston	425	4	202	45	Yes
Mass. Homeo. Hosp.	Boston	534	4	121	33	Yes
Mass. Women's Hosp.	Boston	35	2	19	4	Yes
New England Baptist Hospital	Boston	100	3	67	8	Yes
New England Deaconess Hospital	Boston	175	4	142	19	Yes
New England Hospital for Women and Children	Boston	155	1	32	7	Yes
Peter Bent Brigham Hospital	Boston	233	4	121	30	Yes
St. Elizabeth's Hosp.	Boston	200	2	138	24	Yes
St. Margaret's Hosp.	Boston	30	..	..	..	Yes
St. Mary's Infant Asylum and Lying-in Hospital	Boston	150	..	..	..	No
Talitha Cumi Mat. Home and Hospital	Boston	15	2	6	3	No
Brockton Hosp. Co.	Brockton	127	1	46	9	Yes
Goddard Hospital, Inc.	Brockton	65	2	35	7	Yes
Cambridge City Hosp.	Cambridge	114	1	36	13	Yes
Cambridge Hospital	Cambridge	125	1	105	27	Yes
Charlesgate Hospital	Cambridge	85	2	47	12	Yes
Chester Hospital, Inc.	Cambridge	50	2	15	7	Yes
Chelsea Mem. Hosp.	Chelsea	60	1	25	12	Yes
Clinton Hosp. Assn.	Clinton	65	1	29	4	Yes
Danvers State Hosp.[3]	Danvers	1,775	1	18	4	Yes
Crary Clinic Hospital	Dartmouth	25	1	11	3	No
Everett Cottage Hosp.	Everett	40	1	16	5	No
Fall River Gen. Hosp.	Fall River	126	1	40	11	Yes
Truesdale Hosp., Inc.	Fall River	88	4	44	13	Yes
Union Hospital	Fall River	150	1	59	18	Yes
Burbank Hospital	Fitchburg	115	2	38	9	Yes
Forest Hills Hospital, Inc.	Forest Hills	125	1	39	7	Yes
Framingham Hospital	Framingham	60	1	29	6	Yes
Union Avenue Hospital, Inc.	Framingham	65	1	23	4	Yes
Addison Gilbert Hosp.	Gloucester	50	1	23	7	Yes
Franklin County Public Hospital	Greenfield	60	1	20	6	Yes

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
General Stephen Henry Gale Hospital	Haverhill	105	2	51	1	Yes
Hale Hospital	Haverhill	65	1	23	7	Yes
Holyoke City Hospital	Holyoke	134	1	56	9	Yes
Providence Hospital	Holyoke	115	1	37	11	Yes
Lawrence Gen. Hosp.	Lawrence	130	1	69	26	Yes
Leominster Hospital	Leominster	50	2	13	7	Yes
Boston Almhouse and Long Island Hosp.	Long Island	450	4	42	8	Yes
Lowell Corp. Hosp.	Lowell	100	2	31	5	Yes
Lowell Gen. Hosp.	Lowell	120	2	37	15	Yes
St. John's Hospital	Lowell	124	2	50	12	Yes
Lynn Hospital	Lynn	200	2	54	14	Yes
Union Hosp., Inc.	Lynn	65	1	28	4	Yes
Malden Hospital	Malden	100	2	48	10	Yes
Medfield State Hosp.[3]	Medfield	1,765	1	10	3	Yes
Lawrence Memorial Hosp. of Medford	Medford	58	4	17	New	No
Melrose Hospital	Melrose	59	3	40	11	Yes
New England Sanitarium and Hospital	Melrose	150	4	61	15	Yes
Essex Sanatorium[3]	Middleton	208	1	16	3	Yes
Milford Hospital	Milford	45	1	30	5	Yes
Farren Mem. Hosp.	Montague City	50	4	22	10	Yes
Leonard Morse Hosp.	Natick	40	1	16	8	Yes
Sassaquin Sanatorium	New Bedford	116	..	8	6	No
St. Luke's Hospital	New Bedford	330	1	82	14	Yes
Anna Jaques Hospital	Newburyport	67	2	23	6	Yes
Newton Hospital	Newton	177	4	91	28	Yes
North Adams Hosp.	North Adams	188	1	28	10	Yes
Cooley Dickinson Hosp.	Northampton	125	2	28	9	Yes
Northampton State Hospital[3]	Northampton	1,230	1	3	1	Yes
Grafton State Hosp.[3]	North Grafton	1,581	1	10	2	Yes
Monson State Hosp.[3]	Palmer	1,175	1	5	..	No
Josiah B. Thomas Hospital	Peabody	40	1	19	10	Yes
Henry W. Bishop 3rd Memorial Hospital	Pittsfield	.....	..	..	..	Yes
Hillcrest Hospital	Pittsfield	37	2	19	4	Yes
House of Mercy Hosp.	Pittsfield	175	2	72	26	No
St. Luke's Hospital of Pittsfield	Pittsfield	125	1	60	20	Yes
Jordan Hospital	Plymouth	66	1	23	8	Yes
Quincy City Hospital	Quincy	70	1	49	8	Yes
Rutland State Sanat.[3]	Rutland	370	1	37	11	Yes
Salem Hospital	Salem	132	2	63	10	Yes
Somerville Hospital	Somerville	65	1	31	10	Yes
Mercy Hospital	Springfield	153	1	70	21	Yes
Springfield Hospital	Springfield	190	2	81	18	Yes
Wesson Mem. Hosp.	Springfield	100	1	38	12	Yes
Florence Crittenton Hope Cottage Hosp.	Swampscott	12	4	4	..	No
Morton Hospital	Taunton	63	1	27	7	Yes
Taunton State Hosp.[3]	Taunton	1,500	1	11	3	Yes
State Infirmary	Tewksbury	2,500	1	55	22	Yes
Waltham Hospital	Waltham	104	1	76	20	Yes
Westboro State Hosp.[3]	Westboro	1,400	1	7	2	Yes
Noble Hospital	Westfield	120	1	19	6	Yes
Millers River Hosp.	Winchendon	25	1	6	3	Yes
Winchester Hospital	Winchester	40	..	26	4	Yes
Charles Choate Memorial Hospital	Woburn	40	2	24	4	Yes
Memorial Hospital	Worcester	205	4	86	20	Yes
St. Vincent Hospital	Worcester	225	2	88	16	Yes
Worcester City Hosp.	Worcester	400	2	136	49	Yes
Worcester Hahnemann Hospital	Worcester	82	1	36	4	Yes
Worcester State Hosp.[3]	Worcester	2,265	1	17	9	Yes
MICHIGAN						
James W. Sheldon Memorial Hospital	Albion	40	2	15	New	Yes
Brainerd Hospital	Alma	21	gr. sch.	4	2	No
Carney Private Hosp.	Alma	20	gr. sch.	11	3	No
St. Joseph's Mercy Hospital	Ann Arbor	180	2	80	15	Yes
University Hospital	Ann Arbor	1,100	4	257	64	Yes
Battle Creek Sanit.	Battle Creek	1,000	4	170	41	Yes
Nichols Mem. Hosp.	Battle Creek	100	2	32	5	Yes
Mercy Hospital	Bay City	120	2	51	16	Yes
Benton Harbor Hospital Association	Benton Harbor	40	2	11	1	Yes
Mercy Hospital	Cadillac	50	2	10	1	Yes
Children's Hospital of Michigan[3]	Detroit	250	4	21	7	Yes
Dunbar Mem. Hosp.[1]	Detroit	45	4	10	..	Yes
Evangelical Deaconess Hospital	Detroit	115	2	14	..	Yes
Grace Hospital	Detroit	392	2	161	47	Yes
Harper Hospital	Detroit	460	4	161	60	Yes
Henry Ford Hospital	Detroit	500	4	231	New	Yes
Providence Hospital	Detroit	275	2	86	20	Yes
St. Joseph's Mercy Hospital	Detroit	150	2	40	8	Yes
St. Mary's Hospital	Detroit	300	2	71	21	Yes
Woman's Hospital and Infants' Home	Detroit	165	2	25	7	Yes
Harriet Chapman Hospital, Inc.	Eaton Rapids	20	gr. sch.	8	3	No
Hurley Hospital	Flint	224	2	76	5	Yes
Blodgett Mem. Hosp.	Grand Rapids	134	4	114	24	Yes
Butterworth Hospital	Grand Rapids	220	2	122	12	Yes
Christian Psychopathic Hospital	Grand Rapids	130	gr. sch.	18	5	No
St. Mary's Hospital	Grand Rapids	200	4	80	19	Yes
Mercy Hospital	Grayling	30	2	8	3	Yes
St. Joseph's Hospital	Hancock	60	2	25	1	Yes
Highland Park General Hospital	Highland Park	150	2	48	7	Yes
W. A. Foote Memorial Hospital	Jackson	125	4	47	9	Yes
Mercy Hospital	Jackson	60	2	35	4	Yes
Borgess Hospital	Kalamazoo	103	2	27	5	Yes
Bronson Method. Hosp.	Kalamazoo	54	2	42	7	Yes
Kalamazoo State Hosp.[3]	Kalamazoo	2,343	2	12	..	Yes
Edward W. Sparrow Hospital	Lansing	84	4	38	7	Yes
St. Lawrence Hosp.	Lansing	100	2	37	4	Yes
Calumet Mem. Hosp.	Laurium	20	2	18	..	Yes
Mercy Hosp. & Sanit.	Manistee	60	2	10	3	Yes
St. Luke's Hosp., Inc.	Marquette	52	4	20	8	Yes
St. Joseph' Hospital and Sanitarium	Mt. Clemens	200	2	26	4	Yes
Hackley Hospital	Muskegon	101	2	54	9	Yes
Mercy Hospital	Muskegon	100	4	34	8	Yes
Memorial Hospital	Owosso	58	2	28	4	Yes
Petoskey Hospital	Petoskey	40	2	11	6	Yes
Pontiac City Hosp.	Pontiac	65	2	7	3	Yes
Pontiac State Hosp.	Pontiac	1,671	2	49	6	No
Pt. Huron Hospital	Pt. Huron	50	2	29	10	Yes
Saginaw Gen. Hosp.	Saginaw	150	2	71	13	Yes
St. Mary's Hospital	Saginaw	78	2	35	12	Yes
Woman's Hospital	Saginaw	50	1	12	..	Yes
Chippewa County Memorial Hospital	Sault Ste. Marie	53	..	..	..	Yes
James Decker Munson Hospital	Traverse City	55	2	28	3	Yes
Traverse City State Hospital	Traverse City	2,038	..	..	..	Yes
MINNESOTA						
City & County Hosp.	Albert Lea	70	1	24	8	Yes
St. Olaf Luth. Hosp.	Austin	52	1	26	2	Yes
St. Francis Hospital	Breckenridge	50	1	12	3	Yes
Bethesda Hospital	Crookston	45	1	19	4	Yes
St. Vincent's Hospital	Crookston	44	1	10	3	Yes
Dawson Surgical Hosp.	Dawson	25	1	10	3	Yes
Duluth Hospital	Duluth	20	2	4	3	No
St. Luke's Hosp. Assn.	Duluth	233	2	102	12	Yes
St. Mary's Hospital	Duluth	250	4	120	29	Yes
Minnesota School for Feeble Minded and Colony for Epilepties	Faribault	100	gr. sch.	16	4	No
St. Lucas Deaconess Hospital	Faribault	50	1	25	5	Yes
Fergus Falls State Hospital[3]	Fergus Falls	1,756	1	41	7	Yes††
George B. Wright Memorial Hospital	Fergus Falls	20	1	20	5	Yes
St. Luke's Hospital	Fergus Falls	50	2	27	7	Yes
Western Minn. Hosp.	Graceville	34	1	13	3	Yes
Northern Minnesota Hosp. Assn.	International Falls	50	1	5	5	Yes
Litchfield Hospital	Litchfield	30	1	15	3	Yes
St. Gabriel's Hosp.	Little Falls	50	2	17	3	Yes
Ebenezer Hospital	Madison	20	..	6	2	No
Immanuel Luth. Hosp.	Mankato	75	2	32	9	Yes
Marshall Hospital	Marshall	25	1	8	3	No
Abbott Hospital	Minneapolis	100	4	64	10	Yes
Asbury Hospital	Minneapolis	151	4	97	6	Yes
Bethany Home	Minneapolis	62	gr. sch.	5	7	No
Eithel Hospital	Minneapolis	100	4	75	14	Yes
Fairview Hospital[9]	Minneapolis	150	4	98	23	Yes
Hill Crest Surgical Hospital, Inc.	Minneapolis	51	4	34	11	Yes
Lutheran Deaconess Home and Hospital	Minneapolis	150	4	74	15	Yes
Maternity Hosp., Inc.[3]	Minneapolis	47	1	10	10	Yes
Northwestern Hospital	Minneapolis	110	4	94	24	Yes
St. Andrew's Hospital of German Luthern Church	Minneapolis	32	1	21	5	Yes
St. Barnabas Hospital	Minneapolis	175	4	77	27	Yes
St. Mary's Hospital	Minneapolis	225	4	130	34	Yes
Swedish Hospital	Minneapolis	215	4	125	..	Yes
Univer'y of Minnesota School of Nursing[10]	Minneapolis	292	4	391	60	Yes
Montevideo Hospital	Montevideo	25	1	17	3	Yes
St. Ansgars Hospital	Moorhead	50	1	20	7	Yes
Union Hospital	New Ulm	45	2	13	..	Yes
Nopeming Sanatorium	Nopeming	225	2	10	5	Yes
Northfield Hosp. Assn.	Northfield	15	gr. sch.	2	..	No
Ortonville Evangelical Hospital	Ortonville	20	4	9	..	Yes
Owatonna City Hosp.	Owatonna	21	4	11	3	Yes
Ashton Mem. Hosp.	Pipestone	50	4	11	..	No
Pokegama Sanatorium	Pokegama	58	1	6	..	No
St. John's Hospital	Red Wing	75	4	26	7	Yes
The Kahler Hospitals School of Nursing[11]	Rochester	583	4	268	62	Yes

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
Rochester State Hosp..	Rochester.....	1,400	1	40	8	Yes††
St. Mary's Hospital...	Rochester.....	515	4	185	38	Yes
Mudcura Sanitarium...	Shakopee.....	100	4	8	2	No
Home Hospital.....	Slayton.....	27	2	17	2	Yes
St. Raphael's Hospital	St. Cloud.....	75	4	38	5	Yes
Ancker Hospital.....	St. Paul.....	850	1	155	46	Yes
Bethesda Hospital.....	St. Paul.....	108	4	61	14	Yes
Midway Hospital.....	St. Paul.....	115	4	91	27	Yes
Mounds Park Sanit....	St. Paul.....	125	4	93	24	Yes
St. John's Hosp.....	St. Paul.....	95	4	36	12	Yes
St. Joseph's Hospital.	St. Paul.....	224	4	153	40	Yes
St. Luke's Hospital....	St. Paul.....	156	4	80	16	Yes
St. Paul Hospital.....	St. Paul.....	100	3	46	14	Yes
West Side Gen. Hosp..	St. Paul.....	40	2	19	5	Yes
St. Peter State Hosp.[3]	St. Peter.....	1,600	1	28	7	Yes††
Lakeview Mem. Hosp..	Stillwater.....	50	4	13	3	Yes
Wesley Hospital of Wadena	Wadena.....	52	4	12	..	Yes
Warren Hospital.....	Warren.....	46	1	30	9	No
Union Clinic Hospital.	Willmar.....	18	gr. sch.	5	..	No
Willmar Hospital.....	Willmar.....	50	1	17	4	Yes
Winona General Hosp..	Winona.....	86	4	31	6	Yes
MISSISSIPPI						
Gilmore Sanitarium....	Amory.....	30	2	9	2	Yes
Biloxi City Hospital...	Biloxi.....	35	2	10	3	Yes
North East Mississippi Hospital	Booneville.....	50	gr. sch.	12	2	Yes
King's Daug'rs' Hosp..	Brookhaven...	30	2	12	1	Yes
Columbia Hospital....	Columbia.....	35	4	14	5	Yes
Fite Hospital.....	Columbus.....	25	4	6	..	Yes
McRae Hospital, Inc....	Corinth.....	75	4	12	..	No
George C. Hixon Memorial Hospital.....	Electric Mills...	77	4	17	3	Yes
King's Daug'rs' Hosp..	Greenville.....	45	4	32	5	Yes
King's Daug'rs' Hosp..	Greenwood.....	25	2	10	1	Yes
Grenada Hospital.....	Grenada.....	40	2	8	..	Yes
King's Daug'rs' Hosp..	Gulfport.....	118	3	26	6	Yes
Methodist Hospital....	Hattiesburg...	35	4	21	7	Yes
South Mississippi Infirmary	Hattiesburg...	60	4	21	3	Yes
Houston Hospital, Inc.	Houston.....	50	4	14	2	Yes
Jackson Infirmary.....	Jackson.....	75	4	24	2	Yes
Medical and Surgical Clinic	Jackson.....	50	4	14	5	Yes
Mississippi Bapt. Hosp.	Jackson.....	100	4	36	2	Yes
Mississippi State Charity Hospital.....	Jackson.....	100	2	16	7	Yes
Dr. Roland Cranford's Hospital	Laurel.....	55	4	30	6	Yes
S. Mississippi Charity Hospital	Laurel.....	150	4	28	4	Yes
Lumberton Hosp., Inc.	Lumberton.....	68	1	10	..	Yes
McComb City Hospital	McComb.....	30	4	9	2	Yes
McComb Infirmary.....	McComb.....	36	1	8	..	Yes
Matty-Hersee Hospital.	Meridian.....	109	1	28	3	Yes
Meridian Sanitarium..	Meridian.....	50	4	10	3	Yes
Rush's Infirmary.....	Meridian.....	60	4	10	..	Yes
Chamberlain-Rice Hos.	Natchez.....	52	4	63	New	No
Natchez Charity Hosp.	Natchez.....	130	4	13	4	Yes
Natchez Sanit., Inc.....	Natchez.....	40	4	14	4	Yes
Bramlett Hospital.....	Oxford.....	20	gr. sch.	3	1	Yes
Oxford Hospital.....	Oxford.....	25	4	7	1	Yes
Pearl River Co. Hosp..	Poplarville.....	20	1	4	2	Yes
Poplarville Hospital..	Poplarville.....	20	4	6	..	Yes
Tupelo Hospital.....	Tupelo.....	35	2	12	2	Yes
Tylertown Hospital....	Tylertown.....	15	2	4	..	No
Vicksburg Infirmary...	Vicksburg.....	50	4	24	10	Yes
Vicksburg Sanitarium and Crawford Street Hospital	Vicksburg.....	75	1	33	5	Yes
Mississippi State Charity Hospital.....	Vicksburg.....	110	4	24	8	Yes
Water Valley Hosp....	Water Valley..	12	4	3	1	No
Ivy Hospital.....	West Point....	25	gr. sch.	5	1	Yes
Winona Infirmary.....	Winona.....	40	2	12	5	Yes
Yazoo Hospital.....	Yazoo City....	30	2	8	2	Yes
MISSOURI						
St. Joseph's Hospital..	Boonville.....	25	1	7	6	Yes
University Hospitals, University of Mo....	Columbia.....	75	4	22	3	Yes
Hadley Hospital.....	Fulton.....	70	gr. sch.	210	..	No
Levering Hospital.....	Hannibal.....	50	1	17	4	Yes
Independence Sanit.....	Independence..	75	3	36	9	Yes
Freeman Hospital.....	Joplin.....	75	2	13	..	Yes
St. John's Hospital....	Joplin.....	100	1	25	5	Yes
Children's Mercy Hosp.[2]	Kansas City...	135	4	16	..	Yes
Kansas City Gen. Hosp.	Kansas City...	330	2	60	14	Yes
Research Hospital.....	Kansas City...	175	4	97	16	Yes
St. Joseph's Hospital..	Kansas City...	225	3	67	19	Yes
St. Luke's Hospital...	Kansas City...	175	4	85	19	Yes
St. Mary's Hospital...	Kansas City...	175	1	60	17	Yes
St. Vincent's Hosp.[3]..	Kansas City...	40	1	18	9	Yes
Trinity Luth. Hosp...	Kansas City...	58	1	57	14	Yes
Wheatley-Provident Hospital	Kansas City...	40	2	14	4	Yes
Willows Maternity Sanitarium	Kansas City...	75	gr. sch.	19	11	No
Grim-Smith Hospital & Clinic, Inc.....	Kirksville.....	36	4	32	6	Yes
St. Francis Hospital...	Maryville.....	75	1	5	3	Yes
Woodland Hospital....	Moberly.....	35	2	18	2	Yes
Burge Hospital.....	Springfield.....	28	2	18	2	Yes
St. John's Hospital....	Springfield.....	100	1	26	6	Yes
Springfield Bapt. Hosp.	Springfield.....	75	2	25	5	Yes
C. Cardwell's Hospital	Stella.....	6	4	1	..	No
Missouri Method. Hosp.	St. Joseph.....	225	4	71	14	Yes
Noyes Hospital.....	St. Joseph.....	80	1	29	2	Yes
St. Joseph's Hospital..	St. Joseph.....	185	1	61	8	Yes
Washington University School of Nursing[12].	St. Louis.....	282	4	142	26	Yes
Bethesda Hospital.....	St. Louis.....	103	2	18	6	Yes
Christian Hospital.....	St. Louis.....	140	2	26	8	Yes
Evangelical Deaconess Home and Hospital.	St. Louis.....	110	1	22	3	Yes
Jewish Hospital of St. Louis	St. Louis.....	272	4	52	10	No
Josephine Hospital....	St. Louis.....	50	1	14	2	Yes
Lutheran Hospital.....	St. Louis.....	100	4	49	11	Yes
Missouri Bapt. Sanit..	St. Louis.....	325	4	124	27	Yes
People's Hospital[1].....	St. Louis.....	50	..	..	..	Yes
St. Ann's Mat. Hosp..	St. Louis.....	50	gr. sch.	7	3	Yes
St. Anthony's Hospital	St. Louis.....	100	1	21	6	Yes
St. John's Hospital...	St. Louis.....	250	4	101	19	Yes
St. Louis Bapt. Hosp..	St. Louis.....	70	1	30	10	Yes
St. Louis City Hosp...	St. Louis.....	700	4	84	19	Yes
St. Louis City Hospital No. 2[1].....	St. Louis.....	250	4	36	5	Yes
St. Louis Mullanphy Hospital	St. Louis.....	125	1	50	15	Yes
St. Luke's Hospital...	St. Louis.....	200	4	107	16	Yes
St. Mary's Hospital...	St. Louis.....	250	1	38	..	No
MONTANA						
St. Ann's Hospital....	Anaconda.....	65	2	16	..	Yes
St. Vincent's Hospital.	Billings.....	160	2	39	6	Yes
Bozeman Deaconess Hospital	Bozeman.....	50	4	22	10	Yes
Butte Deaconess Hosp.	Butte.....	27	2	11	3	Yes
Murray Hospital.....	Butte.....	116	4	40	8	Yes
St. James Hospital....	Butte.....	150	2	46	12	Yes
Frances Mahon Deaconess Hospital.....	Glasgow.....	30	2	8	2	Yes
Columbus Hospital...	Great Falls....	125	2	44	8	Yes
Montana Deaconess Hospital	Great Falls....	115	4	59	14	Yes
Kennedy Deaconess Hospital	Havre.....	34	2	11	..	No
Sacred Heart Hospital	Havre.....	52	2	13	5	Yes
St. John's Hospital...	Helena.....	50	2	15	4	Yes
St. Peter's Hospital...	Helena.....	50	2	16	2	Yes
Kalispell General Hosp.	Kalispell.....	60	4	62	4	Yes
St. Joseph's Hospital..	Lewistown.....	50	2	15	3	Yes
Holy Rosary Hospital	Miles City.....	120	2	25	4	Yes
St. Patrick's Hospital.	Missoula.....	120	2	40	8	Yes
Sidney Deaconess Hosp.	Sidney.....	30	4	11	1	Yes
NEBRASKA						
St. Joseph's Hospital..	Alliance.....	65	4	14	..	Yes
Beatrice Sanitarium...	Beatrice.....	25	2	10	6	Yes
Lutheran Hospital.....	Beatrice.....	65	2	16	3	Yes
Mennonite Deaconess Home and Hospital..	Beatrice.....	30	2	7	3	Yes
St. Francis Hospital...	Grand Island..	200	2	34	7	Yes
Mary Lanning Memorial Hospital.....	Hastings.....	60	4	33	7	Yes
Green Gables, Dr. Benj. F. Bailey Sanat.....	Lincoln.....	115	4	31	8	Yes
Lincoln General Hosp..	Lincoln.....	110	4	50	..	Yes
Lincoln Hospital.....	Lincoln.....	30	2	6	2	Yes
Lincoln Sanitarium...	Lincoln.....	100	4	25	9	Yes
Nebraska Orth. Hosp.[3]	Lincoln.....	100	2	16	5	Yes
St. Elizabeth's Hosp...	Lincoln.....	175	2	42	14	Yes
St. Catherine of Sienna Hospital	McCook.....	43	2	11	..	Yes
Lutheran Hospital Assn. of Norfolk....	Norfolk.....	45	2	28	7	Yes
Bishop Clarkson Memorial Hospital.....	Omaha.....	100	4	32	13	Yes
Creighton Memorial, St. Joseph's Hosp...	Omaha.....	400	2	125	22	Yes
Evangelical Covenant Hospital of Omaha..	Omaha.....	70	2	40	4	Yes
Immanuel Deaconess Institute	Omaha.....	125	2	37	3	Yes
Lord Lister Hospital..	Omaha.....	130	4	61	20	Yes
Nebraska Methodist Episcopal Hosp. and Deaconess Home.....	Omaha.....	295	4	95	25	Yes
Nicholas Senn Hospital	Omaha.....	80	4	62	11	Yes
Paxton Mem. Hosp...	Omaha.....	65	2	18	9	Yes
St. Catherine's Hosp.	Omaha.....	165	2	67	7	Yes
University of Nebraska Hospital	Omaha.....	130	4	85	14	Yes
Wise Memorial Hosp...	Omaha.....	76	4	38	13	Yes

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
West Nebraska Methodist Episcopal Hosp.	Scottsbluff	52	2	16	..	Yes
Evangelical Lutheran Hospital	York	60	2	22	4	Yes
NEW HAMPSHIRE						
Claremont Gen. Hosp.	Claremont	52	1	15	4	Yes
Margaret Pillsbury General Hospital	Concord	50	1	19	4	Yes
New Hamphire Memorial Hospital for Women & Children	Concord	63	1	24	3	Yes
New Hampshire State Hospital [3]	Concord	1,500	1	61	..	Yes
Wentworth Hospital	Dover	62	1	18	33	Yes
Exeter Hospital	Exeter	52	1	12	5	Yes
Franklin Hospital	Franklin	37	1	9	2	Yes
Hillsborough County Hospital	Grasmere	85	1	18	6	Yes
Mary Hitchcock Memorial Hospital	Hanover	70	2	35	5	Yes
Elliot Community Hospital	Keene	80	4	30	9	Yes
Laconia Hospital	Laconia	48	4	21	9	Yes
Littleton Hospital	Littleton	25	1	13	6	Yes
Elliot Hospital	Manchester	75	4	30	10	Yes
Hospital Notre Dame De Lourdes	Manchester	75	1	33	7	Yes
Lucy Hastings Hosp.	Manchester	30	1	14	..	Yes
Sacred Heart Hospital	Manchester	85	1	24	4	Yes
Nashua Hosp. Assn.	Nashua	54	..	..	..	Yes
St. Joseph's Hospital	Nashua	115	4	50	13	Yes
Carrie F. Wright Memorial Hospital	Newport	20	1	6	2	Yes
Pembroke Sanat. Inc.	Pembroke	90	..	..	..	No
Portsmouth Hospital	Portsmouth	67	1	20	2	Yes
Morrison Hospital	Whitefield	35	1	18	5	Yes
Woodsville Hospital	Woodsville	25	1	16	..	Yes
NEW JERSEY						
Atlantic City Hosp.	Atlantic City	235	1	61	13	Yes
Bayonne Hospital and Dispensary	Bayonne	100	1	25	9	Yes
Swiney Sanitarium	Bayonne	28	gr. sch.	6	6	No
Bridgeton Hosp. Assn.	Bridgeton	85	1	22	5	Yes
Cooper Hospital	Camden	201	1	74	11	Yes
W. Jersey Home. Hosp.	Camden	140	1	42	7	Yes
Essex County Hosp.[3]	Cedargrove	2,000	1	7	New	No
Homeopathic Hospital of Essex County	East Orange	60	1	23	13	No
Elizabeth General Hospital and Dispensary	Elizabeth	170	1	50	9	Yes
St. Elizabeth's Hosp.	Elizabeth	160	1	33	12	Yes
Englewood Hosp. Assn.	Englewood	115	2	60	11	Yes
New Jersey State Hosp.[3]	Greystone Pk.	3,355	1	15	4	Yes
Hackensack Hospital	Hackensack	250	1	63	10	Yes
St. Mary's Hospital	Hoboken	450	gr. sch.	32	7	No
Christ Hospital	Jersey City	110	1	59	5	Yes
Greenville Hospital in Jersey City	Jersey City	60	1	14	..	No
Jersey City Hospital	Jersey City	570	1	113	28	Yes
St. Francis' Hospital	Jersey City	220	gr. sch.	30	9	Yes
Dr. E. C. Hazard Hospital, Inc.	Long Branch	95	1	10	1	No
Monmouth Mem. Hosp.	Long Branch	176	1	57	11	Yes
Millville Hospital	Millville	30	1	11	5	Yes
Mountainside Hosp.	Montclair	216	1	75	13	Yes
St. Vincent's Nursery & Babies' Hospital	Montclair	60	4	12	4	No
All Souls Hospital	Morristown	90	1	26	10	Yes
Morristown Mem. Hosp.	Morristown	150	1	39	15	Yes
Babies' Hospital [3]	Newark	40	gr. sch.	..	11	No
Hospital & Home for Crippled Children	Newark	64	gr. sch.	14	8	No
Hospital for Women and Children [3]	Newark	60	1	6	7	Yes
Hosp. of St. Barnabas	Newark	119	1	51	15	Yes
Newark Beth Israel Hospital	Newark	102	1	42	14	Yes
Newark City Hospital	Newark	650	1	64	29	Yes
Newark Matern. Hosp.	Newark	30	gr. sch.	13	8	No
Newark Mem. Hosp.	Newark	150	1	34	12	Yes
Newark Private Hosp.	Newark	50	gr. sch.	16	3	No
Presbyterian Hospital	Newark	80	1	31	10	Yes
St. Gerard's Newark Italian Hospital	Newark	100	..	..	..	No
St. James Hospital	Newark	100	1	23	7	Yes
St. Michael's Hospital	Newark	300	1	36	7	No
Middlesex Gen. Hosp.	New Brunswick	110	1	17	4	Yes
St. Peter's Gen. Hosp.	New Brunswick	91	1	45	10	Yes
Orange Mem. Hosp.	Orange	180	1	102	32	Yes
St. Mary's Hospital	Orange	130	1	29	5	Yes
Passaic Gen. Hosp.	Passaic	200	1	43	7	Yes
St. Mary's Hospital	Passaic	99	1	26	5	Yes
Nathan and Miriam Barnert Mem. Hosp.	Paterson	100	1	26	2	Yes
Paterson Gen. Hosp.	Paterson	300	2	62	5	Yes
St. Joseph's Hosptial	Paterson	290	1	63	22	Yes
Perth Amboy City Hospital	Perth Amboy	100	1	15	5	Yes
Warren Hospital	Phillipsburg	60	1	10	..	No
Muhlenberg Hospital	Plainfield	125	4	50	13	Yes
St. Paul Deaconess Home and Hospital	Pompton Lakes	40	..	..	..	No
Somerset Hospital	Somerville	74	1	15	3	Yes
Ann May Memorial Homeopathic Hosp.	Spring Lake Beach	69	1	20	10	Yes
Overlook Hospital	Summit	80	1	31	7	Yes
Holy Name Hospital	Teaneck	155	1	18	..	No
Mercer Hospital	Trenton	155	1	62	23	Yes
New Jersey State Hosp.[3]	Trenton	2,300	1	6	1	Yes
St. Francis' Hospital	Trenton	211	1	77	8	Yes
William McKinley Mem. Hospital	Trenton	109	1	34	9	Yes
North Hudson Hospital Association	Union City	80	1	9	7	Yes
Newcomb Hospital	Vineland	65	1	12	6	Yes
NEW MEXICO						
St. Joseph's Sanatorium and Hospital	Albuquerque	36	1	18	3	Yes
St. Vincent's Sanatorium and Hospital	Santa Fe	85	1	16	2	Yes
NEW YORK						
Albany Hospital	Albany	411	1	86	35	Yes
Memorial Hospital	Albany	126	1	42	14	Yes
St. Peter's Hospital	Albany	135	1	33	11	Yes
Amsterdam City Hosp.	Amsterdam	86	1	17	7	Yes
St. Mary's Hospital	Amsterdam	100	1	40	6	Yes
Auburn City Hospital	Auburn	150	1	59	16	Yes
Mercy Hospital of Auburn, Inc.	Auburn	25	gr. sch.	16	5	No
St. Jerome's Hospital	Batavia	52	1	19	4	No
Binghamton City Hosp.	Binghamton	400	1	94	20	Yes
Bingh'ton State Hosp.[3]	Binghamton	2,848	1	27	7	Yes
Brooklyn Eye & Ear Hospital	Brooklyn	76	gr. sch.	13	5	No
Brooklyn Hospital	Brooklyn	260	1	139	40	Yes
Brooklyn State Hosp.[3]	Brooklyn	1,618	1	23	11	Yes
Bushwick Hosp., Inc.	Brooklyn	110	1	23	8	Yes
Caledonian Hospital	Brooklyn	25	..	..	..	No
Carson C. Peck Memorial Hospital	Brooklyn	90	1	46	15	Yes
Cumberland Hospital	Brooklyn	350	1	45	17	Yes
Hospital of the Holy Family	Brooklyn	94	1	44	11	Yes
Jewish Hospital of Brooklyn	Brooklyn	265	1	77	..	Yes
Kings County Hosp.	Brooklyn	1,800	1	96	41	Yes
Long Island College Hospital	Brooklyn	470	1	117	45	Yes
Methodist Epis. Hosp.	Brooklyn	375	1	108	51	Yes
Norwegian Lutheran Deaconesses' Home and Hospital	Brooklyn	210	2	38	9	Yes
Prospect Heights Hospital and Brooklyn Maternity	Brooklyn	106	2	36	10	Yes
St. Catherine's Hosp.	Brooklyn	252	1	73	9	Yes
St. John's Hospital	Brooklyn	86	1	26	11	Yes
St. Mary's Hospital of the City of Brooklyn	Brooklyn	268	1	96	29	Yes
St. Peter's Hospital	Brooklyn	250	gr. sch.	28	6	No
Swedish Hospital	Brooklyn	64	1	13	3	Yes
Wyckoff Heights Hosp. & Soc. of Brooklyn	Brooklyn	161	1	37	6	Yes
Buffalo City Hospital	Buffalo	825	1	260	40	Yes
Buffalo Colum. Hosp.	Buffalo	73	gr. sch.	20	5	No
Buffalo General Hosp.	Buffalo	400	1	118	25	Yes
Buffalo Hosp. of the Sisters of Charity	Buffalo	215	1	70	19	Yes
Buffalo State Hosp.[3]	Buffalo	2,200	1	14	6	Yes
Children's Hospital of Buffalo [3]	Buffalo	124	2	50	9	Yes
Deaconess Hospital	Buffalo	162	1	57	33	Yes
Lafayette Gen. Hosp.	Buffalo	50	gr. sch.	12	3	No
Millard Fillmore Hosp.	Buffalo	130	1	60	30	Yes
Mary McClellan Hosp.	Cambridge	50	4	7	1	Yes
Frederick Ferris Thompson Hospital	Canandaigua	125	1	26	14	Yes
Central Islip State Hospital [3]	Central Islip	5,900	1	35	8	Yes
Clifton Springs Sanitarium and Clinic	Clifton Springs	400	2	83	12	Yes
Cohoes Hospital	Cohoes	60	2	20	4	Yes
Corning Hospital	Corning	85	1	31	5	Yes
Cortland Co. Hosp.	Cortland	70	1	41	11	Yes
Dansville Gen. Hosp.	Dansville	22	gr. sch.	2	..	Yes
Arnot-Ogden Memorial Hospital	Elmira	100	2	61	17	Yes
St. Joseph's Hospital	Elmira	152	2	74	25	Yes
St. Joseph's Hospital	Far Rockaway	73	1	34	15	Yes
Flushing Hosp. & Disp.	Flushing	150	1	35	12	Yes
Albert Lindley Lee Memorial Hospital	Fulton	35	..	8	4	No
Geneva General Hosp.	Geneva	57	1	37	9	Yes
Glens Falls Hosp., Inc.	Glens Falls	75	1	35	8	Yes
Nathan Littauer Hosp.	Gloversville	120	1	29	7	Yes

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
Gowanda State Homeopathic Hospital [3]	Helmuth	1,275	1	17	2	Yes
Bethesda Hospital Corporation, Inc.	Hornell	45	1	9	3	No
St. James' Mercy Hosp.	Hornell	62	1	20	7	No
Hudson City Hospital	Hudson	85	2	51	16	Yes
Ithaca Memorial Hosp.	Ithaca	126	1	53	21	Yes
Mary Immaculate Hospital Association	Jamaica	80	1	34	11	Yes
Jamestown Gen. Hosp.	Jamestown	102	1	25	4	Yes
Woman's Christian Association Hospital.	Jamestown	56	1	26	3	Yes
Johnson City. General Hospital	Johnson City	141	1	59	14	Yes
Kings Park State Hosp. [3]	Kings Park	4,923	1	24	4	Yes
Kingston Hospital	Kingston	77	1	34	8	Yes
Our Lady of Victory Sanitarium	Kingston	90	1	39	4	Yes
Our Lady of Victory Hospital	Lackawana	90	1	52	7	Yes
Little Falls Hospital	Little Falls	31	1	16	5	Yes
Lockport City Hosp.	Lockport	77	2	21	2	Yes
St. John's Long Island City Hospital	Long Isl. City	245	1	48	11	Yes
Alice Hyde Mem. Hosp.	Malone	35	1½	13	4	Yes
Medina Memorial Hosp.	Medina	28	gr. sch.	3	..	No
Middletown State Homeopathic Hosp. [3]	Middletown	2,921	1	34	6	Yes
Nassau Hosp. Assn.	Mineola	200	1	61	3	Yes
Mt. Vernon Hospital	Mt. Vernon	110	1	40	10	Yes
St. Luke's Hospital	Newburgh	134	1	49	14	Yes
New Rochelle Hospital Association	New Rochelle	115	1	23	10	Yes
Bellevue Hospital	New York City	1,707	1	232	50	Yes
Beth David Hospital	New York City	126	gr. sch.	20	8	No
Beth Israel Hospital	New York City	137	1	41	13	Yes
Columbus Hosp. Ext.	New York City	100	1	60	10	Yes
Fifth Avenue Hospital	New York City	295	4	75	12	Yes
French Hospital	New York City	106	1	46	11	Yes
Harlem Hospital	New York City	262	4	57	11	Yes
Jewish Maternity Hosp.	New York City	52	1	..	34	No
Jewish Mem. Hosp.	New York City	116	gr. sch.	36	13	No
Lebanon Hospital	New York City	162	1	59	24	Yes
Lenox Hill Hospital	New York City	345	1	120	35	Yes
Lincoln Hosp. & Home	New York City	331	4	131	38	Yes
Manhattan State Hosp. [3]	New York City	6,613	1	61	13	Yes
Metropolitan Hospital	New York City	1,600	1	74	17	Yes
Misericordia Hospital	New York City	341	2	46	15	Yes
Montefiore Hospital for Chronic Diseases [3]	New York City	580	1	57	2	Yes
Mt. Sinai Hospital	New York City	650	4	275	75	Yes
New York City Hosp.	New York City	1,027	1	88	23	Yes
New York Homeopathic Medical College and Flower Hospital	New York City	189	1	36	..	Yes
New York Hospital	New York City	306	4	81	18	Yes
New York Post-Graduate Medical School and Hospital	New York City	410	4	100	54	Yes
Presybterian Hosp. in the City of New York	New York City	256	4	160	51	Yes
Roosevelt Hospital	New York City	377	4	109	46	Yes
St. Luke's Hospital	New York City	417	4	150	50	Yes
St. Mark's Hospital	New York City	210	1	41	5	Yes
St. Mary's Free Hospital for Children [3]	New York City	140	2	50	11	Yes
St. Vincent's Hospital of the City of N. Y.	New York City	350	1	149	33	Yes
Mt. St. Mary's Hosp.	Niagara Falls	144	1	39	7	Yes
Niagara Falls Memorial Hospital	Niagara Falls	106	1	53	9	Yes
A. Barton Hepburn Hospital	Ogdensburg	158	2	64	22	Yes
St. Lawrence State Hospital [3]	Ogdensburg	2,213	1	86	14	Yes
Mountain Clinic Hosp.	Olean	35	1	15	6	No
Olean General Hosp.	Olean	75	2	27	12	Yes
Broad Street Hospital.	Oneida	55	1	24	10	Yes
Ossining Hospital	Ossining	44	1	9	7	Yes
Peekskill Hospital	Peekskill	65	1	21	4	Yes
Champlain Val. Hosp.	Plattsburg	75	2	33	14	Yes
Physician's Hosp., Inc.	Plattsburg	90	4	42	8	Yes
Hudson River State Hospital [3]	Poughkeepsie	3,950	1	26	5	Yes
St. Francis' Hospital	Poughkeepsie	85	1	30	5	Yes
Vassar Bros'. Hosp.	Poughkeepsie	181	2	69	14	Yes
United Hospital	Pt. Chester	82	1	22	9	Yes
Deer Park Hosp.	Pt. Jervis	20	gr. sch.	6	2	No
Jamaica Hospital	Richmond Hill	123	1	42	12	Yes
Highland Hospital of Rochester	Rochester	171	4	99	25	Yes
Lee Private Hospital	Rochester	65	gr. sch.	19	10	No
Park Ave. Hospital	Rochester	81	1	55	15	Yes
Rochester Gen. Hosp.	Rochester	300	4	171	25	Yes
Genesee Hospital	Rochester	200	2	74	18	Yes
Rochester State Hosp. [3]	Rochester	1,790	1	22	61	Yes
					31‡	
Strong Mem. Hosp.	Rochester	230	4	39	..	Yes
St. Mary's Hospital	Rochester	179	1	72	18	Yes
Rome Hospital	Rome	50	1	29	..	Yes
Saratoga Hospital	Saratoga Sp'gs	83	1	41	8	Yes
Ellis Hospital	Schenectady	230	1	95	18	Yes
Craig Colony [3]	Sonyea	1,500	1	19	5	Yes
Southampton Hosp.	Southampton	57	2	30	..	Yes
Staten Island Hosp.	Staten Island	162	1	43	8	Yes
Crouse-Irving Hospital	Syracuse	170	4	104	48	Yes
Gen. Hosp. of Syracuse	Syracuse	100	1	40	12	Yes
Hospital of the Good Shepherd, Syracuse University	Syracuse	257	4	145	31	Yes
Onondaga Gen. Hosp.	Syracuse	39	2	..	3	Yes
Peoples Hospital	Syracuse	33	gr. sch.	12	4	No
St. Joseph's Hospital.	Syracuse	235	3	66	10	Yes
Syracuse Mem. Hosp.	Syracuse	139	1	97	11	Yes
Leonard Hospital	Troy	54	1	30	6	Yes
Samaritan Hospital	Troy	166	4	73	14	Yes
Troy Hospital	Troy	250	1	90	27	Yes
Trudeau Sanatorium [3]	Trudeau	160	1	38	9	Yes
Faxton Hospital	Utica	130	1	67	11	Yes
St. Elizabeth's Hosp.	Utica	93	1	45	14	Yes
St. Luke's Home and Hospital	Utica	123	1	48	16	Yes
Utica Homeop. Hosp.	Utica	63	1	36	4	Yes
Utica State Hospital [3]	Utica	2,500	1	25	8	Yes
Wyoming County Community Hosp.	Warsaw	55	1	17	3	No
House of the Good Samaritan	Watertown	106	1	38	21	Yes
Mercy Hospital	Watertown	94	1	50	13	Yes
Bloomingdale Hosp. [3]	White Plains	350	1	35	3	Yes
White Plains Hospital Association	White Plains	103	2	42	8	Yes
Willard State Hosp. [3]	Willard	4,519	1	32	14	Yes
St. John's Riverside Hospital	Yonkers	100	1	25	8	Yes
St. Joseph's Hospital	Yonkers	104	1	27	7	Yes
Yonkers Homeopathic Hosp. & Maternity	Yonkers	123	2	31	8	Yes
NORTH CAROLINA						
Memorial Hospital	Ashboro	23	1	3	..	....
Appalachian Hall [3]	Asheville	50	2	19	1	....
Asheville Miss'n Hosp.	Asheville	100	4	39	4	....
Blue Ridge Hospital.	Asheville	20	4	8	1	....
French Broad Hospital	Asheville	63	2	22	3	....
Meriwether Hospital	Asheville	53	4	16	7	....
Grace Hospital	Banners Elk	15	2	2	..	....
Biltmore Hospital	Biltmore	44	4	22	6	....
Rainey Hospital	Burlington	28	4	12	3	....
Good Samaritan Hosp.	Charlotte	50	2	12	2	....
Mercy Hospital	Charlotte	60	4	24	5	....
New Charlotte Sanat.	Charlotte	75	2	45	12	....
Presbyterian Hospital.	Charlotte	100	4	45	11	....
St. Peter's Hospital	Charlotte	55	3	28	6	....
Concord Hospital	Concord	25	2	6	1	....
Lincoln Hospital	Durham	100	2	28	3	....
Watts' Hospital	Durham	118	2	61	9	....
Cumberland Gen. Hosp.	Fayetteville	35	4	14	4	....
Highsmith Hospital	Fayetteville	100	4	34	9	....
Pittman Hospital, Inc.	Fayetteville	60	2	31	10	....
Angel Brothers' Hosp.	Franklin	30	4	6	..	....
City Hospital	Gastonia	70	2	14	2	....
Gaston County Colored Hospital	Gastonia	23	..	..	..	....
Gaston County Sanat.	Gastonia	30	2	8	3	....
Spicer's Sanatorium	Goldsboro	30	..	..	..	....
St. Leo's Hospital	Greensboro	100	1	42	10	....
Wesley Long Hospital	Greensboro	35	4	21	9	....
Pitt Com. Hosp., Inc.	Greenville	42	4	14	..	....
Hamlet Hospital	Hamlet	75	4	20	2	....
Jubilee Hospital	Henderson	15	1	9	1	....
Maria Parham Hosp.	Henderson	30	4	10	2	....
Richard Baker Hosp.	Hickory	35	4	10	1	....
Guilford General Hosp.	High Point	35	1	13	5	....
High Point Hospital	High Point	62	4	23	3	....
Memorial General Hospital, Inc.	Kinston	35	2	10	New	....
Parrott Memorial Hospital, Inc.	Kinston	40	4	18	3	....
Leaksville Hosp., Inc.	Leaksville	27	1	10	..	....
Caldwell Hosp., Inc.	Lenoir	25	4	8	..	....
Davidson Hospital	Lexington	24	1	10	..	....
Lincoln Hospital	Lincolnton	50	2	14	3	....
Baker Sanatorium, Inc.	Lumberton	65	2	24	5	....
Thompson Memorial Hospital, Inc.	Lumberton	36	4	16	..	....
Ellen Fitzgerald Hosp.	Monroe	65	2	30	2	....
Morehead City Hosp.	Morehead City	25	4	7	1	....
Grace Hospital, Inc.	Morganton	50	1	13	1	....
Martin Mem. Hosp.	Mt. Airy	50	4	22	4	....
New Bern Gen. Hosp.	New Bern	21	..	8	1	....
St. Luke's Hospital	New Bern	25	1	11	1	....
Brantwood Hospital	Oxford	25	4	11	2	....
Mary Elizabeth Hosp.	Raleigh	40	4	15	2	....
Rex Hospital	Raleigh	109	4	45	6	....
St. Agnes' Hospital	Raleigh	110	2	28	12	....
State Hospital [3]	Raleigh	1,850	1	24	1	....
Roanoke Rapids Hosp.	Roanoke	50	1	18	4	....
Park View Hospital Association, Inc.	Rocky Mount	90	4	39	6	....
Rocky Mount Sanit.	Rocky Mount	50	2	17	5	....
Rutherford Hosp., Inc.	Rutherfordton	60	2	18	4	....

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
Salisbury Hosp., Inc...	Salisbury.....	55	2	20	8	....
Central Carolina Hosp.	Sanford.....	24	2	15	3	....
Scott Hospital.....	Sanford.....	28	4	12	5	....
North Carolina Sanatorium for the Treatment of Tuberculosis [3]	Sanatorium....	370	1	18	4	....
Shelby Hospital.....	Shelby.....	45	2	14	4	....
Johnston County Hospital, Inc.....	Smithfield.....	35	1	10	..	....
Davis Hospital, Inc...	Statesville.....	50	4	20	1	....
Long's Sanatorium.....	Statesville.....	60	1	29	6	....
Edgecombe Gen. Hosp.	Tarboro.....	35	4	11	1	....
Anson Sanatorium.....	Wadesboro....	50	2	13	2	....
River View Hospital...	Washington...	15	2	4	..	....
Bulluck Hospital.....	Wilmington....	35	1	12	3	....
Community Hospital..	Wilmington....	20	..	..	..	....
James Walker Memorial Hospital.....	Wilmington...	134	4	52	1	....
Carolina General Hospital, Inc.....	Wilson.....	45	4	20	7	....
Moore-Herring Hospital, Inc.....	Wilson.....	25	1	15	3	....
City Memorial Hosp...	Winston-Salem	235	4	42	7	....
Lawrence Cooke Clinic Hospital, Inc.....	Winston-Salem	43	4	16	6	....
North Carolina Baptist Hospital	Winston-Salem	90	4	31	10	....
NORTH DAKOTA						
Bismarck Hospital and Deaconess Home.....	Bismarck.....	140	4	78	..	Yes
St. Alexius Hospital...	Bismarck.....	109	4	47	12	Yes
General Hospital of Devils Lake.....	Devils Lake....	45	2	13	1	Yes
Mercy Hosp. & Mercy Detention Hospital...	Devils Lake....	50	4	18	2	Yes
St. John's Hospital....	Fargo.....	200	4	100	18	Yes
St. Luke's Hospital....	Fargo.....	150	4	76	18	Yes
Grafton Deac'ss Hosp.	Grafton.....	50	2	13	6	Yes
Grand Forks Deaconess Hospital	Grand Forks...	85	4	44	11	Yes
St. Michael's Hospital.	Grand Forks...	57	2	22	5	Yes
Trinity Hospital.....	Jamestown....	85	4	33	7	Yes
Kenmare Deac. Hosp...	Kenmare.....	50	1	16	4	Yes
Mandan Deac'ess Hosp.	Mandan.....	30	2	5	..	No
St. Joseph's Hospital.	Minot.....	72	1	36	10	Yes
Trinity Hosp. Assn....	Minot.....	150	2	65	10	Yes
Good Samaritan Hosp.	Rugby.....	40	4	19	5	Yes
North Dakota State T. B. Sanatorium [3]..	San Haven.....	156	4	4	..	No
Wahpeton Hospital....	Wahpeton.....	29	4	10	1	Yes
Mercy Hospital.....	Williston.....	60	2	18	..	Yes
OHIO						
City Hosp. of Akron..	Akron.....	191	1	73	17	Yes
Peoples Hosp. Co.....	Akron.....	154	2	44	7	Yes
Alliance City Hosp.....	Alliance.....	100	2	22	10	Yes
Samaritan Hospital....	Ashland.....	35	4	12	1	Yes
Ashtabula Gen. Hosp..	Ashtabula.....	75	1	25	5	Yes
Athens State Hospital.	Athens.....	1,469	1	12	7	No
Wells Hosp. Company	Cambridge.....	24	1	8	3	No
Aultman Mem. Hosp..	Canton.....	160	4	43	12	Yes
Mercy Hospital.....	Canton.....	93	4	50	10	Yes
Bethesda Hospital and Deaconess Assn.....	Cincinnati.....	215	4	107	24	Yes
Christ Hospital.....	Cincinnati.....	145	2	91	27	Yes
Cincinnati Gen. Hosp..	Cincinnati.....	800	4	93	21	Yes
Deaconess Hospital....	Cincinnati.....	70	4	39	4	Yes
Good Samaritan Hosp.	Cincinnati.....	216	4	110	19	Yes
Jewish Hospital.....	Cincinnati.....	242	2	78	22	Yes
City Hospital.....	Cleveland.....	1,100	4	102	13	Yes
Evangelical Lutheran Hospital	Cleveland.....	110	1	40	10	Yes
Fairview Park Hosp...	Cleveland.....	80	1	58	8	Yes
Glenville Hospital.....	Cleveland.....	100	2	27	2	Yes
Huron Road Hospital.	Cleveland.....	120	1	28	..	Yes
Lakewood Pub. Hosp..	Cleveland.....	72	4	22	5	Yes
Mt. Sinai Hospital.....	Cleveland.....	218	4	85	21	Yes
St. Alexis Hospital.....	Cleveland.....	235	1	89	11	Yes
St. Ann's Matrn. Hosp.	Cleveland.....	322	1	25	32	Yes
St. John's Hospital....	Cleveland.....	158	4	96	16	Yes
St. Luke s Hospital....	Cleveland.....	165	4	93	14	Yes
St. Vincent's Charity Hospital	Cleveland.....	300	4	114	38	Yes
Western Reserve Univ. School of Nursing [13].	Cleveland.....	480	4	163	36	Yes
Columbus Radium Hospital	Columbus.....	50	2	17	3	Yes
Columbus State Hosp.	Columbus.....	2,100	gr. sch.	6	..	No
Grant Hospital.....	Columbus.....	303	4	154	36	Yes
Mercy Hospital.....	Columbus.....	65	1	24	3	Yes
Mt. Carmel Hospital..	Columbus.....	225	4	102	20	Yes
St. Clair Hospital.....	Columbus.....	31	gr. sch.	..	4	No
Starling-Loving University Hospital.....	Columbus.....	187	4	72	11	Yes
White Cross Hospital Association	Columbus.....	250	4	105	18	Yes
Coshocton City Hosp.	Coshocton.....	42	1	9	3	Yes
Miami Valley Hospital	Dayton.....	321	4	179	35	Yes
Jane M. Case Hosp...	Delaware.....	35	4	13	6	Yes
East Liverpool City Hospital	East Liverpool	75	1	21	5	Yes
Elyria Mem. Hosp.....	Elyria.....	20	1	20	9	Yes
Home and Hospital of the City of Findlay.	Findlay.....	52	4	25	4	Yes
Mem. Hosp. of Sandusky County.....	Fremont.....	50	4	18	3	Yes
Holzer Hospital.....	Gallipolis.....	52	4	31	4	Yes
Mercy Hospital.....	Hamilton.....	140	4	70	17	Yes
Lancaster Mun. Hosp.	Lancaster.....	45	2	18	3	Yes
Lima Hospital Society	Lima.....	90	4	43	12	Yes
St. Rita's Hospital....	Lima.....	100	1	50	9	Yes
St. Joseph's Hospital..	Lorain.....	120	1	34	8	Yes
Mansfield Gen. Hosp...	Mansfield.....	62	1	37	4	Yes
Martin's Ferry Hosp...	Martin's Ferry	75	2	18	New	No
Massillon Hosp. Assn..	Massillon.....	92	4	24	5	Yes
Massillon State Hosp..	Massillon.....	2,282	gr. sch.	16	5	No
Middletown Hospital..	Middletown....	82	4	39	New	Yes
Mt. Vernon Hospital-Sanitarium	Mt. Vernon....	40	1	33	8	No
Newark City Hospital.	Newark.....	50	1	24	3	Yes
The Sanit.-Hosp.....	Newark.....	25	gr. sch.	10	2	No
Lake Co. Mem. Hosp..	Painesville.....	66	1	28	7	Yes
Ball Memorial Hosp...	Piqua.....	46	1	25	4	Yes
Mercy Hospital.....	Portsmouth...	66	1	15	..	Yes
Portsmouth Gen. Hosp.	Portsmouth...	90	1	25	6	Yes
Schirrmann Hospital...	Portsmouth...	50	1	17	2	Yes
Salem City Hospital...	Salem.....	50	4	21	4	Yes
Good Samaritan Hosp.	Sandusky.....	54	1	31	2	Yes
Providence Hospital....	Sandusky.....	30	1	16	5	Yes
Springfield City Hosp.	Springfield.....	132	2	60	7	Yes
Gill Hospital.....	Steubenville....	32	1	15	3	No
Ohio Val. Hosp. Assn..	Steubenville....	100	2	38	4	Yes
East Side Hospital....	Toledo.....	26	1	14	4	No
Flower Hospital.....	Toledo.....	47	4	65	14	Yes
Lucas County Hosp...	Toledo.....	100	1	18	5	Yes
Maternity & Children's Hospital [3]	Toledo.....	186	1	30	6	Yes
Mercy Hospital.....	Toledo.....	101	1	56	17	Yes
Robinwood Hospital...	Toledo.....	83	4	45	6	Yes
St. Vincent's Hospital.	Toledo.....	350	1	140	23	Yes
Toledo Hospital.....	Toledo.....	125	4	48	5	Yes
Toledo State Hospital	Toledo.....	2,050	1	23	7	No
Van Wert Co. Hosp...	Van Wert.....	45	1	15	6	Yes
Warren City Hospital.	Warren.....	70	1	28	5	Yes
Hodson Hosp.(Homeo.)	Washington Court House	13	gr. sch.	3	1	No
Kinney & Knestrick Hospital Company...	Wooster.....	25	1	9	4	No
St. Elizabeth's Hosp...	Youngstown...	175	4	77	21	Yes
Youngst'n Hosp. Assn.	Youngstown...	250	4	86	11	Yes
Bethesda Hospital.....	Zanesville.....	200	2	41	6	Yes
Good Samaritan Hosp.	Zanesville.....	125	4	33	9	Yes
OKLAHOMA						
Breco's Hospital.....	Ada.....	25	1	5	1	No
Hardy Sanitarium.....	Ardmore.....	60	4	8	1	Yes
Von Keller Hospital Association, Inc.....	Ardmore.....	30	2	5	..	No
Washington County Memorial Hospital...	Bartlesville....	60	2	11	2	Yes
Masonic Hospital.....	Cherokee.....	50	4	14	4	Yes
Chickasha Hospital....	Chickasha.....	50	2	10	2	Yes
Cottage Hospital.....	Chickasha.....	48	4	15	1	Yes
Clinton Hospital.....	Clinton.....	34	2	11	1	Yes
Weedn Hospital.....	Duncan.....	40	2	12	..	Yes[1]
Tisdal Hospital.....	Elk City.....	50	..	12	..	Yes
El Reno Sanitarium...	El Reno.....	60	2	20	..	Yes
Enid General Hospital.	Enid.....	60	4	29	..	Yes
Enid Springs Sanitarium and Hospital...	Enid.....	35	2	13	1	Yes
University Hospital....	Enid.....	35	4	15	2	Yes
Erick Hospital, Inc....	Erick.....	25	4	5	..	No
Oklahoma M. E. Hosp.	Guthrie.....	35	4	14	3	Yes
Henryetta Hospital....	Henryetta.....	35	4	11	3	Yes
Southwestern Hospital.	Lawton.....	30	2	9	3	Yes
Border Hospital.....	Mangum.....	35	4	9	1	Yes
Albert Pike Hospital..	McAlester.....	50	2	20	5	Yes
Miami Baptist Hosp...	Miami.....	50	4	18	2	Yes
Muskogee Gen. Hosp...	Muskogee.....	75	2	12	5	Yes
Oklahoma Bapt. Hosp.	Muskogee.....	64	2	30	9	Yes
Central Oklahoma State Hospital [3].....	Norman.....	100	2	16	7	Yes
Holmes Home of Redeeming Love.....	Oklahoma City	13	gr. sch.	3	..	No
St. Anthony's Hospital	Oklahoma City	155	2	56	17	Yes
State Univ. Hosp.....	Oklahoma City	286	4	72	14	Yes
Wesley Hospital.....	Oklahoma City	55	4	25	12	Yes
Okmulgee City Hosp...	Okmulgee.....	65	2	16	6	Yes
Pawhuska Mun. Hosp.	Pawhuska.....	50	4	12	..	Yes
American Hospital.....	Picher.....	40	2	3	1	Yes[1]
Ponca City Hospital..	Ponca City....	38	2	24	4	Yes
Home Hospital.....	Sand Springs..	30	2	9	3	Yes
Shawnee City Hospital	Shawnee.....	80	4	24	7	Yes
Maurice Willows Hosp.[2]	Tulsa.....	25	..	..	..	Yes
Morningside Hospital..	Tulsa.....	75	2	20	..	Yes
Oklahoma Hospital....	Tulsa.....	52	2	18	3	Yes
St. John's Hospital....	Tulsa.....	250	4	29	..	Yes
Woodward Gen. Hosp..	Woodward.....	30	1	8	..	Yes

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
OREGON						
St. Mary's Hospital	Astoria	92	4	17	2	Yes
St. Elizabeth's Hosp	Baker	63	4	6	4	Yes
Eugene Hospital	Eugene	53	4	18	5	Yes
Mercy Hospital	Eugene	75	4	12	4	No
Pacific Christian Hosp.	Eugene	88	4	37	..	Yes
Grande Ronde Hosp	La Grande	50	4	10	New	No
Sacred Heart Hospital	Medford	55	4	8	1	Yes
Holy Rosary Hospital	Ontario	35	4	5	1	Yes†
St. Anthony's Hosp	Pendleton	81	4	13	5	Yes
Emanuel Hospital	Portland	100	4	76	7	Yes
Good Samaritan Hosp.	Portland	314	4	134	42	Yes
Multnomah Co. Hosp.	Portland	185	4	28	7	Yes
Portland Sanitarium	Portland	100	4	49	19	Yes
St. Vincent's Hospital	Portland	370	4	115	30	Yes
Salem Hospital	Salem	90	4	11	4	Yes
The Dalles Hospital	The Dalles	65	4	16	6	Yes
PENNSYLVANIA						
Abington Mem. Hosp.	Abington	118	2	49	12	Yes
Allentown Hosp. Assn.	Allentown	225	2	92	25	Yes
Allentown State Hosp.[3]	Allentown	1,350	2	64	10	Yes
Sacred Heart Hospital	Allentown	195	1	57	12	Yes
Altoona Hospital	Altoona	162	4	57	11	Yes
Mercy Hospital	Altoona	101	1	38	5	Yes
State Hospital	Ashland	250	1	25	6	Yes¶¶
Northern Pennsylvania Hospital and Sanit.	Austin	25	4	3	0	No
Providence Hospital	Beaver Falls	45	4	20	6	Yes
Center County Hosp.	Bellefonte	46	1	17	2	Yes¶¶
Suburban Gen. Hosp.	Bellevue	58	1	27	4	Yes
Berwick Hospital	Berwick	50	1	15	3	No
St. Luke's Hospital	Bethlehem	186	1	51	11	Yes
Bloomsburg Hospital	Bloomsburg	50	2	26	10	No
Blossburg State Hosp.	Blossburg	80	1	25	6	Yes¶¶
Braddock Gen. Hosp.	Braddock	115	1	26	3	Yes¶¶
Bradford Hospital	Bradford	100	2	29	8	Yes
Brookville Hospital	Brookville	31	1	11	6	No
Brownsville Gen. Hosp.	Brownsville	85	1	22	4	Yes¶¶
Bryn Mawr Hospital	Bryn Mawr	116	2	33	5	Yes
Butler County Memorial Hospital	Butler	109	1	30	4	Yes¶¶
Canonsburg Gen. Hosp.	Canonsburg	54	2	16	..	Yes¶¶
Carbondale Gen. Hosp.	Carbondale	65	1	20	3	No
Chambersburg Hosp.	Chambersburg	90	2	16	10	Yes¶¶
Chester Hospital	Chester	250	1	35	..	Yes¶¶
J. Lewis Crozer Home for Incurables and Homeopathic Hosp.	Chester	85	1	12	6	Yes
Hillside Hospital for Mental Diseases	Clark's Summit	800	gr. sch.	11	..	No
Clearfield Hospital	Clearfield	96	2	39	11	Yes
Coatesville Hospital	Coatesville	50	2	23	2	Yes
Columbia Hospital	Columbia	50	2	16	1	Yes¶¶
Corry Hospital	Corry	40	1	19	2	Yes¶¶
Penn. State Sanatorium for T. B. No. 3	Cresson	700	gr. sch.	15	10	No
Geo. F. Geisinger Memorial Hospital	Danville	140	2	68	14	Yes
State Hospital[3]	Danville	1,650	1	70	11	Yes
Dixmont Hospital[3]	Dixmont	675	2	19	5	Yes
Du Bois Hospital	Du Bois	50	1	15	4	Yes
Maple Avenue Hosp.	Du Bois	69	2	25	7	Yes
Eagleville Sanatorium for Consumptives[3]	Eagleville	130	1	8	4	Yes¶¶
Easton Hospital	Easton	109	1	33	5	Yes
Fisher Eye, Nose and Throat Hospital	Erie	30	..	..	..	No
Hamot Hosp. Assn.	Erie	187	1	58	16	Yes
St. Vincent's Hospital	Erie	220	1	73	13	Yes
Westmoreland Hospital Association	Greensburg	104	1	38	10	Yes
Greenville Hospital	Greenville	60	4	10	2	Yes
Harrisburg Hospital	Harrisburg	200	4	90	17	Yes
Harrisburg Polyclinic	Harrisburg	125	4	41	7	Yes¶¶
Hazleton State Hosp.	Hazleton	125	4	29	7	Yes
Homestead Hospital	Homestead	150	1	18	10	Yes
J. C. Blair Memorial Hospital	Huntingdon	68	2	28	2	Yes
Indiana Hospital	Indiana	81	1	23	7	Yes
Dr. F. C. Sanford's Private Hospital	Jersey Shore	12	2	5	2	No
Conemaugh Valley Memorial Hospital	Johnstown	160	1	57	36	Yes¶¶
Mendenhall Mat. Hosp.	Johnstown	16	2	6	2	No
Mercy Hospital of Johnstown	Johnstown	86	1	40	6	Yes
Kane Summit Hosp.	Kane	87	1	17	8	Yes
Nesbitt W. S. Hosp.	Kingston	69	2	20	5	Yes
Lancaster Gen. Hosp.	Lancaster	163	2½	74	15	Yes¶¶
St. Joseph's Hospital	Lancaster	200	1	89	22	Yes
Latrobe Hospital	Latrobe	59	1	24	3	Yes
Good Samaritan Hosp.	Lebanon	71	2	8	1	Yes
Lewistown Hospital	Lewistown	44	1	4	..	No
Lock Haven Hospital	Lock Haven	78	2	22	7	Yes
Pittsburgh City Home and Hospital	Mayview	2,800	1	48	4	Yes¶¶
McKeesport Hospital	McKeesport	100	1	54	17	Yes
Ohio Val. Gen. Hosp.	McKee's Rocks	60	2	10	2	Yes¶¶
Meadville City Hosp.	Meadville	46	1	20	6	Yes
Spencer Hospital	Meadville	100	2	26	5	Yes¶¶
Media Hospital	Media	20	1	6	1	No
Mercer Cottage Hosp.	Mercer	45	1	9	..	No
Mercer Sanitarium[3]	Mercer	45	1	13	3	Yes
Monongahela Memorial Hospital	Monongahela	72	2	18	4	Yes¶¶
Mt. Pleasant Memorial Hospital	Mt. Pleasant	60	1	16	3	Yes¶¶
Muncy Val. Priv. Hosp.	Muncy	20	1	11	3	No
State Hospital	Nanticoke	90	1	34	4	Yes
Beaver Valley General Hospital	New Brighton	67	1	35	8	Yes
New Castle Hospital	New Castle	100	2	38	4	Yes
Shenango Val. Hosp.	New Castle	85	2	18	6	Yes'¶
Citizens Gen. Hosp.	New Kensington	80	1	25	5	Yes
Montgomery Hospital	Norristown	103	4	20	6	Yes
Norristown State Hospital	Norristown	3,126	4	31	26	No
Hall Hospital	Northampton	50	1	9	..	No
Oil City Hospital	Oil City	56	1	26	4	Yes¶¶
Taylor Hosp. Assn.	Old Forge	44	1	20	6	Yes¶¶
Palmerton Hospital	Palmerton	65	1	26	3	Yes
Mid-Valley Hospital	Peckville	50	1	21	7	Yes'¶
American Hospital for Diseases of Stomach	Philadelphia	40	2	26	6	Yes
Chestnut Hill Hosp.	Philadelphia	96	2	33	8	Yes
Children's Homeopathic Hospital[3]	Philadelphia	165	2	32	4	Yes
Children's Hospital of Philadelphia[3]	Philadelphia	96	2	25	9	Yes
Frankford Hospital	Philadelphia	113	1	46	6	Yes
Frederick Douglas Mem. Hospital[1]	Philadelphia	78	4	18	3	No
Friends Hospital[3]	Philadelphia	190	2	18	2	Yes
Germantown Dispensary and Hospital	Philadelphia	264	2	81	12	Yes
Hahnemann Medical College & Hospital	Philadelphia	359	2	127	27	Yes
Hospital of the Protestant Episcopal Church in Philadelphia	Philadelphia	450	2	72	23	Yes
Hosp. of the Woman's Med. Col. of Pa.	Philadelphia	112	2	26	7	Yes
Hospital of the Grad. School of Medicine	Philadelphia	328	2	77	17	Yes
Hospital of the University of Pa.	Philadelphia	528	4	199	62	Yes
Howard Hospital	Philadelphia	82	2	16	2	Yes
Jefferson Medical College Hospital	Philadelphia	578	4	220	52	Yes
Joseph Price Memorial Hospital	Philadelphia	69	1	34	5	Yes
Kensington Hospital for Women	Philadelphia	68	1	25	6	Yes
Lankenau Hospital	Philadelphia	248	2	88	26	Yes
Maternity Hospital	Philadelphia	38	gr. sch.	6	6	No
Memorial Hospital	Philadelphia	114	1	16	4	Yes
Mercy Hospital[1]	Philadelphia	90	4	36	5	Yes¶¶
Methodist Epis. Hosp.	Philadelphia	248	2	124	27	Yes
Misericordia Hospital	Philadelphia	238	2	100	41	Yes
Mt. Sinai Hospital	Philadelphia	175	2	50	10	Yes
Northeastern Hospital of Philadelphia	Philadelphia	65	1	21	3	Yes¶¶
Northwest'n Gen. Hosp.	Philadelphia	56	1	12	6	Yes¶¶
Pennsylvania Hospital Dept. for Nervous & Mental Diseases[3]	Philadelphia	350	1‡ 2‡‡	38	3	Yes
Pennsylvania Hospital Dept. for Sick and Injured	Philadelphia	315	4	84	18	Yes
Phila. Gen. Hosp.	Philadelphia	2,000	2	258	..	Yes
Philadelphia Lying-in Charity Hospital	Philadelphia	64	gr. sch.	18	..	No
Philadelphia Orthopedic Hospital & Infirmary for Nerv. Diseases[3]	Philadelphia	136	2	16	2	Yes
Presbyterian Hospital in Philadelphia	Philadelphia	372	2	94	18	Yes
Preston Retreat	Philadelphia	50	4	10	10	Yes¶¶
Samaritan Hospital	Philadelphia	206	1	72	16	Yes
St. Agnes' Hospital	Philadelphia	336	1	123	23	Yes
St. Christopher's Hospital for Children[3]	Philadelphia	62	1	15	6	Yes
St. Joseph's Hospital	Philadelphia	175	4	84	18	Yes
St. Luke's Homeopathic Hospital	Philadelphia	54	1	22	8	Yes
St. Mary's Hospital	Philadelphia	200	1	56	8	Yes
St. Vincent's Hospital for Women and Children	Philadelphia	329	gr. sch.	14	1	Yes
Stetson Hospital of Philadelphia	Philadelphia	65	1	18	3	Yes
West Philadelphia Gen. Homeo. Hosp. and Dispensary	Philadelphia	65	1	2	2	No
West Philadelphia Hospital for Women	Philadelphia	75	1	37	..	Yes
Women's Homeopathic Hosp. of Philadelphia	Philadelphia	200	4	24	3	Yes

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
Woman's Hospital of Philadelphia	Philadelphia	185	1	41	12	Yes
Philipsburg State Hospital	Philipsburg	100	1	31	4	Yes
Phoenixville Hospital	Phoenixville	85	1	14	3	Yes
Allegheny Gen. Hosp.	Pittsburgh	405	4	101	18	Yes
Children's Hospital of Pittsburgh [3]	Pittsburgh	215	4	30	4	Yes
Elizabeth Steel Magee Hospital [3]	Pittsburgh	170	4	46	9	Yes
Haddon Maternity Hospital	Pittsburgh	25	1	6	4	No
Homeopathic Medical & Surgical Hospital & Disp. of Pitts.	Pittsburgh	143	1	90	11	Yes
Mercy Hospital	Pittsburgh	600	4	206	52	Yes
Montefiore Hosp. Assn. of Western Pa.	Pittsburgh	58	1	35	8	Yes
Passavant Hospital	Pittsburgh	134	1	45	7	Yes
Pittsburgh Hospital	Pittsburgh	106	1	67	15	Yes
Presbyterian Hospital	Pittsburgh	185	4	77	20	Yes
Rosella Foundling and Maternity Hospital	Pittsburgh	82	gr. sch.	16	11	No
South Side Hospital	Pittsburgh	225	1	54	8	Yes
St. Francis Hospital	Pittsburgh	600	2	165	36	Yes
St. John's Gen. Hosp.	Pittsburgh	190	4	73	18	Yes
St. Joseph's Hospital and Dispensary	Pittsburgh	120	1	49	14	Yes
St. Margaret Memorial Hospital	Pittsburgh	152	1	36	10	Yes
Western Pa. Hosp.	Pittsburgh	500	4	265	57	Yes
Pittston Hosp. Assn.	Pittston	55	2	21	7	Yes
Homeopathic Hospital	Pottstown	70	1	7	5	Yes¶¶
Pottstown Hospital	Pottstown	80	2	20	4	Yes
Pottsville Hospital	Pottsville	140	1	37	9	Yes
Adrian Hospital	Punxsutawney	65	4	17	2	No
Punxsutawney Hosp.	Punxsutawney	55	2	15	4	Yes¶¶
Homeo. Medical and Surgical Hospital	Reading	82	2	29	8	Yes¶¶
Reading Hospital	Reading	300	4	92	13	Yes
St. Joseph's Hospital	Reading	180	1	51	6	Yes
Renovo Hospital	Renovo	25	1	3	3	No
Elk Co. Gen. Hospital	Ridgway	50	1	20	5	Yes
Taylor Hospital, Inc.	Ridley Park	75	1	17	6	No
Nason Hospital	Roaring Sp'gs.	58	2	18	1	Yes
Rochester Gen. Hosp.	Rochester	88	1	28	4	Yes¶¶
People's Cooperative Hospital	Sayre	35	1	14	4	Yes¶¶
Robert Packer Hosp.	Sayre	217	2	77	17	Yes
Hahnemann Hosp.	Scranton	111	1	48	12	Yes
Mercy Hospital	Scranton	100	4	42	12	Yes
Moses Taylor Hospital	Scranton	100	2	47	6	Yes
Scranton State Hosp.	Scranton	185	1	54	16	Yes
St. Mary's Keller Memorial Hospital	Scranton	45	1	21	9	Yes
West Side Hospital	Scranton	65	2	31	..	Yes
Grand View Hospital	Sellersville	35	1	18	6	Yes
Sewickley Valley Hospital Association	Sewickley	45	1	16	5	Yes
Christian H. Buhl Hosp.	Sharon	125	1	33	7	Yes¶¶
Pennsylvania State Sanatorium for T. B. No. 11902	S. Mountain	825	gr. sch.	15	3	No
Miner's Hospital of Northern Cambria	Spangler	65	1	26	7	Yes¶¶
Simon H. Barnes Memorial Hospital	Susquehanna	20	gr. sch.	3	4	No
Allegheny Val. Hosp.	Tarentum	92	2	20	2	Yes¶¶
Titusville City Hosp.	Titusville	50	4	5	2	Yes
Uniontown Hospital	Uniontown	164	1	61	13	Yes
Warren General Hosp.	Warren	80	1	28	5	Yes
Warren State Hosp. [3]	Warren	1,700	1	38	12	Yes
Washington Hospital	Washington	150	1	45	7	Yes¶¶
Wernersville State Hospital	Wernersville	1,225	gr. sch.	10	..	No
Chester County Hosp.	West Chester	116	4	42	7	Yes
Homeopathic Hospital of Chester County	West Chester	62	4	19	2	Yes
White Haven Sanat. [3]	White Haven	240	1	24	11	No
Mercy Hospital	Wilkes Barre	165	4	60	15	Yes
Wilkes-Barre General Hospital	Wilkes Barre	325	2	112	..	Yes
Wyoming Valley Homeopathic Hospital	Wilkes Barre	75	1	33	11	Yes
Columbia Hospital	Wilkinsburg	170	2	67	13	Yes
Williamsport Hosp.	Williamsport	300	4	67	18	Yes
Windber Hospital	Windber	93	4	29	9	Yes¶¶
York Hospital	York	106	2	35	3	Yes
RHODE ISLAND						
Notre Dame Hospital	Central Falls	50	1	6	..	No
State Hospital for Mental Diseases [3]	Howard	1,750	1	21	5	Yes
Newport Hospital	Newport	193	2	44	22	Yes
Memorial Hospital	Pawtucket	100	1	52	16	Yes
Butler Hosptial [3]	Providence	170	1	27	10	Yes
Homeopathic Hospital of Rhode Island	Providence	122	..	36	11	Yes
Providence Surg. Hosp.	Providence	32	2	7	1	No
Rhode Island Hosp. [14]	Providence	600	2	218	45	Yes
St. Joseph's Hospital	Providence	180	2	71	25	Yes
Westerly Hospital	Westerly	73	4	6	..	Yes
Woonsocket Hospital	Woonsocket	150	1	37	2	Yes
SOUTH CAROLINA						
Abbeville County Memorial Hospital	Abbeville	35	1	6	3	Yes
Anderson Co. Hosp.	Anderson	80	1	24	7	Yes
Camden Hospital	Camden	55	4	10	4	Yes
Baker Sanatorium	Charleston	50	2	22	5	Yes
McClennan Hospital	Charleston	20	4	8	4	Yes
Roper Hospital	Charleston	270	2	62	17	Yes
St. Francis Xavier Infirmary	Charleston	35	..	..	..	....
Benedict College Hosp. [1]	Columbia	27	2	9	2	Yes
Columbia Hospital of Richland County	Columbia	125	1	32	18	Yes
Good Samaritan Hosp.	Columbia	46	4	17	4	Yes
South Carolina Baptist Hospital	Columbia	125	2	58	12	Yes
South Carolina State Hospital	Columbia	2,550	1	36	9	No
Waverley Hospital [1]	Columbia	30	2	13	..	Yes
Florence Infirmary	Florence	125	4	54	12	Yes
Saunders Mem. Hosp.	Florence	65	4	23	4	Yes
City Hospital	Gaffney	50	2	10	1	Yes
Emma Moss Booth Memorial Hospital	Greenville	66	2	20	4	Yes
Greenville City Hosp.	Greenville	119	2	39	7	Yes
Montgomery Hospital (Chick Springs Sanit. and Health Resort)	Greenville	60	1	13	..	Yes
St. Luke's Hospital	Greenville	25	2	3	..	Yes
Greenwood City Hosp.	Greenwood	50	4	12	3	Yes
Kelley Sanatorium	Kingstree	28	4	10	..	Yes
Leesville Infirmary	Leesville	35	2	4	..	Yes
Mullins Hospital	Mullins	35	4	19	4	Yes
Newberry Co. Hosp.	Newberry	25	4	10	..	Yes
Orangeburg Hospital	Orangeburg	50	4	20	6	Yes
Fennell Infirmary	Rock Hill	65	2	19	3	Yes
Lyle Hospital	Rock Hill	20	4	7	..	Yes
Mary Black Clinic and Private Hospital	Spartanburg	50	4	26	6	Yes
Provident Hospital	Spartanburg	20	1	6	..	Yes
Spartanburg General Hospital	Spartanburg	98	4	35	10	Yes
Tuomey Hospital	Sumter	40	2	23	5	Yes
Charles Es Dorn Hosp.	Walterboro	50	2	12	3	Yes
SOUTH DAKOTA						
Lincoln Hospital	Aberdeen	75	1	31	7	Yes
St. Luke's Hospital	Aberdeen	100	2	42	10	Yes
Chamberlain Sanitarium and Hospital	Chamberlain	75	4	37	6	Yes
St. Joseph's Hospital	Deadwood	75	2	18	4	Yes
Dell Rapids Hospital	Dell Rapids	30	2	12	5	Yes
Lutheran Sanitarium and Hospital	Hot Springs	50	2	15	..	Yes
Our Lady of Lourdes Sanit. & Hosp.	Hot Springs	75	2	20	2	Yes
Sprague Hospital	Huron	50	2	26	2	Yes
New Madison Hospital	Madison	50	4	21	7	Yes
Methodist State Hosp.	Mitchell	95	4	40	9	Yes
St. Joseph s Hospital	Mitchell	85	4	31	8	Yes
St. Mary's Hospital	Pierre	55	2	8	3	Yes
Methodist Deaconess Hospital	Rapid City	50	4	24	..	Yes
Moe Hosp. & Clinic	Sioux Falls	79	4	24	7	Yes
Sioux Falls Hospital	Sioux Falls	35	2	22	3	Yes
Vermilion Hospital	Vermilion	20	gr. sch.	6	2	No
Bartron Hospital	Watertown	60	2	11	3	Yes
Luther Hospital	Watertown	57	4	37	..	Yes
Peabody Hospital	Webster	88	2	24	5	Yes
Sacred Heart Hospital	Yankton	100	2	18	8	Yes
TENNESSEE						
Mercy Hospital	Bristol	18	..	..	..	No
Baroness Erlinger Hospital	Chattanooga	186	2	56	10	Yes
Chattanooga Hospital	Chattanooga	60	2	16	4	Yes
Newell & Newell Sanit.	Chattanooga	65	4	24	17	Yes
Clarksville Hospital	Clarksville	28	4	12	1	No
Speck Hospital	Cleveland	25	4	5	2	No
King's Daugh's' Hosp.	Columbia	30	1	9	3	Yes
Broyles and Darwin Private Sanitarium	Dayton	12	..	..	..	No
Baird-Brewer Hospital	Dyersburg	50	4	16	3	Yes
Dyersburg Gen. Hosp.	Dyersburg	50	2	8	3	Yes
Greeneville Sanitarium and Hospital	Greeneville	35	1	10	1	Yes
Crook Sanatorium	Jackson	65	2	15	2	Yes
Appalachian Hospital	Johnson City	50	2	15	4	No
Ft. Sanders Hosp.	Knoxville	65	2	30	9	Yes
Knoxville Gen. Hosp.	Knoxville	200	2	48	9	Yes
Riverside Hospital	Knoxville	50	2	24	8	Yes
J. J. Harrison, Jr., Sanitarium	Loudon	25	..	..	..	No
Madison Rural Sanit.	Madison	45	1	47	8	Yes
McMinnville Infirmary	McMinnville	10	gr. sch.	2	..	No
Baptist Mem. Hosp.	Memphis	325	2	146	40	Yes
Gartley-Ramsey Hosp.	Memphis	42	2	28	14	Yes

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
Jane Terrell Baptist Hospital [1]	Memphis	110	..	..	..	Yes
Memphis General Hosp.	Memphis	350	2	57	5	Yes
Mercy Hospital	Memphis	25	4	7	1	Yes
Methodist Hospital	Memphis	175	3	66	4	Yes
Royal Circle Hospital [1]	Memphis	41	..	..	..	No
St. Joseph's Hospital	Memphis	350	2	76	14	Yes
Morristown Gen. Hosp.	Morristown	30	gr. sch.	8	2	Yes
Baptist Hospital	Nashville	75	2	35	14	Yes
Barr Infirmary	Nashville	25	4	8	2	Yes
City View Sanitarium [3]	Nashville	65	2	8	..	Yes
Dozier Hospital	Nashville	30	..	..	..	Yes
Davidson County Tuberculosis Hospital [3]	Nashville	178	1	17	2	Yes
George W. Hubbard Hospital of Meharry Medical College [1]	Nashville	140	4	39	5	Yes
Mercy Hospital	Nashville	.....	..	..	..	Yes
Millie E. Hale Hosp. [1]	Nashville	60	2	22	8	Yes
Nashville City Hosp.	Nashville	150	4	40	10	Yes
Protestant Hospital	Nashville	120	..	..	..	Yes
St. Thomas Hospital	Nashville	200	4	68	16	Yes
Vanderbilt Univ. Hosp.	Nashville	216	4	45	5	Yes
Wiggins Clinic	Paris	15	4	5	..	No
Chamberlain Memorial Hospital	Rockwood	40	2	10	2	Yes
Emerald-Hodgeon Hospital	Sewanee	50	4	3	3	Yes
TEXAS						
West Texas Baptist Sanitarium, Inc.	Abilene	75	4	24	New	Yes
Northwest Texas Hosp.	Amarillo	80	2	19	5	Yes
St. Anthony's Sanit.	Amarillo	68	4	16	4	Yes
Austin City Hospital	Austin	60	2	22	4	Yes
Seton Infirmary	Austin	150	1	40	5	Yes
St. David's Hospital	Austin	46	4	25	6	Yes
Halley & Love Sanit.	Ballinger	25	2	10	2	Yes
Hotel Dieu Hospital	Beaumont	175	1	47	11	Yes
S. B. Allen Mem. Hosp.	Bonham	35	1	9	..	Yes
Brady Sanitarium	Brady	30	gr. sch.	13	..	Yes
Central Texas Hosp.	Brownwood	30	2	15	1	Yes
Cameron Hospital	Cameron	50	1	11	2	Yes
Navarro County Hosp.	Corsicana	50	1	10	2	Yes
Burns Hospital	Cuero	35	gr. sch.	10	3	Yes
Baylor Hospital	Dallas	414	4	146	41	Yes
Dallas Baby Camp and Hospital [3]	Dallas	45	1	8	..	No
Parkland Hospital	Dallas	250	4	72	13	Yes
St. Paul's Sanitarium	Dallas	310	4	90	22	Yes
Mercy Hospital	Denison	25	4	12	..	Yes
Denton Hospital and Clinic	Denton	35	2	13	..	No
El Paso Masonic Hosp.	El Paso	40	1	18	4	Yes
Providence Hospital	El Paso	50	1	13	2	No
Forney Sanitarium	Forney	25	1	10	6	Yes
All Saints Episcopal Hospital	Ft. Worth	50	2	30	5	Yes
Baptist Hospital of Ft. Worth	Ft. Worth	65	2	109	12	Yes
City and Co. Hosp.	Ft. Worth	57	4	17	..	Yes
Harris' Hospital	Ft. Worth	90	2	30	7	Yes
Southwestern Hospital	Ft. Worth	50	2	22	6	Yes
St. Joseph's Infirmary	Ft. Worth	125	4	70	15	Yes
Gainesville Sanitarium	Gainesville	25	2	10	4	Yes
John Sealy Hospital	Galveston	308	4	71	25	Yes
St. Mary's Infirmary	Galveston	200	4	50	12	Yes
Hamilton Sanitarium	Hamilton	50	gr. sch.	12	5	Yes
Valley Baptist Hosp.	Harlingen	30	2	8	..	Yes
Baptist Hospital	Houston	200	4	93	17	Yes
Jefferson Davis Hosp.	Houston	165	1	17	2	Yes
Methodist Hospital	Houston	90	3	30	..	Yes
St. Joseph's Infirmary	Houston	250	1	45	11	Yes
Kerrville Clinic and Secor Hospital	Kerrville	30	4	6	1	No
La Grange Hospital	La Grange	25	4	11	1	Yes
Lubbock Sanitarium	Lubbock	60	2	35	3	Yes
West Texas Hospital	Lubbock	62	2	17	3	Yes
Angelina County Hosp.	Lufkin	42	2	11	2	Yes
Torbett Sanatorium	Marlin	35	1	10	2	Yes
Kahn Memorial Hosp.	Marshall	25	1	14	4	Yes
McKinney City Hosp.	McKinney	40	1	9	3	Yes
Comal Sanitarium	New Braunfels	30	gr. sch.	10	..	No
Frances Ann Lutcher Hospital	Orange	65	4	12	4	Yes
International & Great Northern Railroad Employees' Hospital	Palestine	75	2	10	6	Yes
Sanitarium of Paris	Paris	50	2	29	9	Yes
St. Joseph's Infirmary	Paris	50	2	18	6	Yes
Plainview Sanitarium	Plainview	32	2	13	4	Yes
Mary Gates Mem. Hosp.	Pt. Arthur	60	1	20	..	Yes
Prairie View Hosp.	Prairie View	50	4	15	3	Yes
Quanah Sanitarium	Quanah	25	1	9	..	Yes
San Angelo Hospital	San Angelo	25	1	10	..	Yes
St. John's Sanitarium	San Angelo	30	1	14	3	Yes
Dr. Kenney's Sanat.	San Antonio	72	1	16	1	Yes
Lee Surgical Hospital	San Antonio	30	3	28	5	Yes
Physicians' and Surgeons' Hospital	San Antonio	75	2	34	12	Yes
Robert B. Green Memorial Hospital	San Antonio	135	4	33	12	Yes
Santa Rosa Infirmary	San Antonio	300	1	92	17	Yes
San Antonio State Hospital [3]	San Antonio	2,150	4	19	4	Yes
State Tuberculosis Sanatorium	Sanatorium	300	4	27	5	No
Soldiers' and Sailors' Memorial Hospital	San Marcos	30	4	4	..	No
Sealey Hospital	Santa Anna	35	4	10	..	No
Sherman Hospital	Sherman	66	1	23	6	Yes
St. Vincent's Sanit.	Sherman	100	1	24	9	Yes
Stamford Sanitarium	Stamford	50	1	15	1	Yes
Dr. Floeckinger's Sanit.	Taylor	16	4	4	2	No
Taylor Sanitarium	Taylor	20	4	10	2	Yes
King's Daug'rs' Hosp.	Temple	85	2	39	1	Yes
Scott and White Hosp.	Temple	135	4	99	21	Yes
Texarkana Sanitarium and Hospital	Texarkana	50	2	22	4	Yes
Central Texas Baptist Sanitarium	Waco	100	2	37	12	Yes
Providence Sanitarium	Waco	150	1	45	10	Yes
New Waxahachie Sanit.	Waxahachie	32	4	10	4	Yes
Caney Valley Hospital	Wharton	25	4	6	2	Yes
Wichita Gen. Hosp.	Wichita Falls	110	2	25	14	Yes
Huth Memorial Hosp.	Yoakum	50	2	10	..	Yes
UTAH						
Utah-Idaho Hospital	Logan	50	4	23	9	Yes
Thomas D. Dee Memorial Hospital	Ogden	130	4	71	9	Yes
Dr. W. H. Groves Latter-Day Saints' Hospital	Salt Lake City	225	4	124	22	Yes
Holy Cross Hospital	Salt Lake Ctiy	225	4	94	20	Yes
Salt Lake County General Hospital	Salt Lake City	185	2	46	5	Yes
St. Mark's Hospital	Salt Lake City	156	2	38	5	Yes
VERMONT						
Barre City Hospital	Barre	50	1	18	3	Yes
Rockingham Gen. Hosp.	Bellows Falls	28	1	12	2	Yes
Brattleboro Mem. Hosp.	Brattleboro	45	1	16	3	Yes
Bishop De Goesbriand Hospital, Inc.	Burlington	125	4	60	New	Yes
Mary Fletcher Hospital, Inc.	Burlington	130	4	60	15	Yes
Heaton Hospital	Montpelier	62	2	22	10	Yes
Orleans County Memorial Hospital	Newport	40	2	6	New	Yes
Randolph Sanatorium	Randolph	50	1	17	3	Yes
Rutland Hospital	Rutland	60	1	37	7	Yes
St. Albans Hospital	St. Albans	50	1	14	3	Yes
Brightlook Hospital Association	St. Johnsbury	34	1	20	11	Yes
Vermont State Hospital for Insane	Waterbury	950	..	17	3	No
Fanny Allen Hospital	Winooski	55	1	33	11	Yes
VIRGINIA						
George Ben Johnson Memorial Hospital	Abingdon	53	2	25	5	Yes
Alexandria Hospital	Alexandria	50	2	19	7	Yes
King's Mountain Memorial Hospital	Bristol	50	2	16	1	Yes¶
Piedmont Sanat. [3]	Burkeville	146	2	14	5	No
Catawa Sanatorium [3]	Catawa Sanatorium	325	2	16	7	No
Blue Ridge Sanat. [3]	Charlottesville	260	2	16	6	No
Martha Jefferson Hospital, Inc.	Charlottesville	55	2	16	2	Yes
New Altamont Hospital, Inc.	Christiansburg	25	2	8	1	No
Chesapeake & Ohio Railway Hospital	Clifton	95	4	27	..	Yes
Hughes Mem. Hosp.	Danville	100	2	30	5	Yes
Edmunds Hospital, Inc.	Danville	50	2	29	..	Yes
Mary Washington Hospital	Fredericksburg	40	2	22	3	Yes
Hampton Training School for Nurses and Dixie Hospital	Hampton	68	4	26	12	Yes
Rockingham Memorial Hospital	Harrisonburg	60	4	36	8	Yes
Loudon Hospital, Inc.	Leesburg	25	2	10	4	Yes
Lynchburg Gen. Hosp.	Lynchburg	85	2	23	6	Yes
Marshall Lodge Memorial Hospital	Lynchburg	75	4	37	12	Yes
Virginia Baptist Hosp.	Lynchburg	102	4	26	New	Yes
Elizabeth Buxton Hosp.	Newport News	90	2	27	3	Yes
Riverside Hospital and Training School Association	Newport News	62	2	14	1	Yes
Whittaker Mem. Hosp.	Newport News	50	4	6	1	Yes¶
Hospital of St. Vincent de Paul	Norfolk	250	4	64	8	Yes
Norfolk Protest. Hosp.	Norfolk	150	2	45	11	Yes
Sarah Leigh Hosp., Inc.	Norfolk	70	4	36	7	Yes
Petersburg Hospital	Petersburg	80	2	22	7	Yes
King's Daugh'rs' Hosp.	Portsmouth	68	2	18	6	Yes
Parrish Mem. Hosp.	Portsmouth	50	2	16	2	Yes
Mattie Williams Hosp.	Richlands	27	2	10	2	Yes

Hospital	City	Beds	Years High School Required	Enrolment	Graduates Last Year	Accredited by State
Grace Hospital	Richmond	45	2	26	7	Yes
Hygeia Hospital	Richmond	50	2	13	2	Yes
Johnston-Willis Hosp.	Richmond	82	2	38	10	Yes
Medical College of Virginia Hosp. Division	Richmond	408	4	44	16	Yes
Retreat for the Sick	Richmond	75	4	32	8	Yes
Sheltering Arms Free Hospital	Richmond	60	3	21	8	Yes
St. Elizabeth's Hosp.	Richmond	50	4	38	..	Yes
St. Luke's Hospital	Richmond	82	4	44	12	Yes
Stuart Circle Hospital	Richmond	112	4	52	9	Yes
Burrell Mem. Hosp.	Roanoke	39	2	14	3	Yes
Jefferson Hosp., Inc.	Roanoke	100	4	33	13	Yes¶
Lewis-Gale Hosp., Inc.	Roanoke	62	2	30	12	Yes
Roanoke Hosp. Assn.	Roanoke	110	2	33	5	Yes
Shenandoah Hosp., Inc.	Roanoke	50	2	24	7	Yes
Mount Regis Sanat.[3]	Salem	65	2	10	3	No
King's Daug'rs' Hosp.	Staunton	60	2	17	5	Yes
Lake View Hospital	Suffolk	52	2	22	..	Yes
University of Virginia Hospital	University	300	4	113	24	Yes
Tucker Sanat., Inc.[3]	Richmond	50	2	14	1	Yes
Winchester Mem. Hosp.	Winchester	70	2	23	6	Yes
WASHINGTON						
St. Joseph's Hospital	Aberdeen	63	2	14	2	No
St. Joseph's Hospital	Bellingham	75	1	20	8	Yes
St. Luke's Hospital	Bellingham	100	4	42	10	Yes
St. Ignatius Hospital	Colfax	50	4	23	5	Yes
Mt. Carmel Hospital	Colville	23	..	..	..	No
Gen. Hosp. of Everett	Everett	75	4	37	5	Yes
Providence Hospital	Everett	110	2	24	3	Yes
Hoquiam Gen. Hosp.	Hoquiam	67	4	18	5	Yes
St. Peter's Hospital	Olympia	125	4	20	4	Yes
Our Lady of Lourdes Hospital	Pasco	50	2	7	1	Yes
Columbus Hospital	Seattle	150	2	41	9	Yes
Minor Hospital	Seattle	70	4	34	8	Yes
Providence Hospital	Seattle	300	4	100	32	Yes
Seattle City Hospital	Seattle	125	2	18	8	Yes
Seattle General Hosp.	Seattle	110	2	76	18	Yes
Swedish Hospital	Seattle	122	4	92	16	Yes
Virginia Mason Hospital, Inc.	Seattle	80	2	39	7	Yes
Maria Beard Deaconess Hospital	Spokane	200	4	80	25	Yes
Sacred Heart Hospital	Spokane	332	4	110	26	Yes
St. Luke's Hospital	Spokane	170	2	83	8	Yes
St. Joseph's Hospital	Tacoma	200	4	66	15	Yes
Tacoma General Hosp.	Tacoma	250	2	90	25	Yes
St. Joseph's Hospital	Vancouver	90	2	25	4	Yes
St. Mary's Hospital	Walla Walla	100	2	30	8	Yes
Central Washington Deaconess Hospital	Wenatchee	40	4	27	2	Yes
St. Anthony's Hospital	Wenatchee	50	2	11	4	Yes
St. Elizabeth's Hosp.	Yakima	122	2	35	11	Yes
WEST VIRGINIA						
King's Daughters' General Hospital	Beckley	70	1	6	2	Yes
Bluefield Sanitarium	Bluefield	85	1	25	5	Yes
St. Luke's Hospital	Bluefield	75	2	30	6	Yes
Buckhannon Hospital	Buckhannon	30	4	6	..	Yes¶
Charleston Gen. Hosp.	Charleston	200	1	32	6	Yes
Kanawha Valley Hospital and Sanitarium	Charleston	70	1	17	3	Yes
McMillan Hospital	Charleston	50	1	17	4	Yes
Mountain State Hosp.	Charleston	112	1	28	7	Yes
St. Francis Hospital	Charleston	100	1	16	1	Yes
Mason Hospital	Clarksburg	40	1	14	3	Yes
St. Mary's Hospital	Clarksburg	125	4	36	3	Yes
Allegheny Heights Hospital	Davis	25	..	..	..	No
Davis Memorial Hosp.	Elkins	50	1	12	3	Yes
Elkins City Hospital	Elkins	50	2	16	3	Yes
Cook Hospital	Fairmont	73	1	26	5	Yes
Fairmont Hosp. No. 3.	Fairmont	85	1	18	3	Yes
Reynolds Mem. Hosp.	Glen Dale	65	1	29	6	Yes
Hinton Hospital	Hinton	75	1	13	4	Yes
Barnett Hospital [1]	Huntington	50	4	6	..	Yes
Chesapeake & Ohio Railway Hospital	Huntington	69	2	18	4	Yes
Guthrie Hospital	Huntington	55	1	25	6	Yes
Huntington Children's Hospital	Huntington	55	2	7	..	Yes
Kessler-Hatfield Hosp.	Huntington	92	1	40	5	Yes
St. Mary's Hospital	Huntington	50	4	9	..	Yes
Hoffman Hosp., Inc.	Keyser	25	4	10	2	Yes
Logan Hospital	Logan	100	1	14	3	Yes
City Hospital	Martinsburg	75	1	12	4	Yes
King's Daug'rs' Hosp.	Martinsburg	50	2	16	2	Yes
McKendree Hosp. No. 2	McKendree	50	1	13	2	Yes
Coal Valley Hosp., Inc.	Montgomery	65	1	15	5	Yes
City Hospital	Morgantown	40	1	8	2	Yes
Monongalia Co. Hosp.	Morgantown	50	..	..	..	Yes
Camden Clark Memorial Hospital	Parkersburg	60	1	20	4	Yes
St. Joseph's Hospital	Parkersburg	100	1	24	4	Yes
Memorial Hospital	Princeton	50	1	11	3	Yes
Princeton Hospital	Princeton	40	1	12	3	Yes
McClung Hospital	Richwood	50	1	9	2	Yes
Sacred Heart Hospital	Richwood	35	4	7	1	Yes
Greenbrier Valley Hosp.	Ronceverte	50	4	20	..	Yes¶
City Hospital	Spencer	25	1	6	2	No
Welch Hospital No. 1.	Welch	115	1	25	6	Yes
Gen. Hosp. of Weston	Weston	40	..	..	..	No
Ohio Valley Gen. Hosp.	Wheeling	183	1	69	15	Yes
Wheeling Hospital	Wheeling	300	1	47	11	Yes
Williamson Hospital	Williamson	55	1	11	3	Yes
WISCONSIN						
Ashland Gen. Hosp.	Ashland	67	1	25	6	Yes
St. Joseph's Hospital	Ashland	150	1	45	12	Yes
Lutheran Deaconess Hospital	Beaver Dam	24	gr. sch.	9	2	No
Luther Hospital	Eau Claire	115	2	46	11	Yes
Sacred Heart Hospital	Eau Claire	109	2	38	9	Yes
St. Agnes' Hospital	Fond du Lac	230	4	84	12	Yes
Bellin Mem. Hosp.	Green Bay	65	1	59	7	Yes
St. Mary's Mothers' & Infants' Home and St. Mary's Hospital	Green Bay	100	1	32	15	Yes
Hudson Sanatorium	Hudson	60	2	14	4	No
Mercy Hospital	Janesville	150	4	18	2	Yes
Kenosha Hospital	Kenosha	155	2	25	6	Yes
Granview Hospital	La Crosse	116	4	54	14	Yes
La Crosse Luth. Hosp.	La Crosse	110	2	80	17	Yes
St. Francis Hospital	La Crosse	200	4	77	7	Yes
St. Mary's Hospital	Ladysmith	35	1	15	6	Yes
Madison Gen. Hosp.	Madison	120	4	80	12	Yes
Madison Method. Hosp.	Madison	50	4	34	6	Yes
St. Mary's Hospital	Madison	100	4	82	6	Yes
State of Wisconsin General Hospital	Madison	450	4	53	..	Yes
Holy Family Hospital	Manitowoc	80	1	25	5	Yes
St. Joseph's Hospital	Marshfield	130	4	63	15	Yes
Columbia Hospital	Milwaukee	93	4	58	12	Yes
Evangelical Deaconess Hospital	Milwaukee	120	1	60	13	Yes
Marquette Univ. Hosp.	Milwaukee	155	4	93	10	Yes
Milwaukee Hospital, "The Passavant"	Milwaukee	225	3	116	20	Yes
Milwaukee Maternity & General Hospital	Milwaukee	69	1	13	2	Yes
Misericordia Hospital	Milwaukee	75	4	9	New	No
Mt. Sinai Hospital	Milwaukee	125	4	79	16	Yes
St. Joseph's Hospital	Milwaukee	140	4	53	14	Yes
St. Mary's Hosp., Inc.	Milwaukee	190	4	94	20	Yes
Theda Clark Memorial Hospital	Neenah	52	2	19	6	Yes
Mercy Hospital	Oshkosh	85	1	63	9	Yes
Prairie du Chien Sanitarium and Hospital	Prairie du Chien	70	1	16	2	Yes
St. Luke's Hospital	Racine	90	2	25	..	Yes
St. Mary's Hospital	Sparta	75	2	21	4	Yes
St. Mary's Hospital	Superior	110	2	22	6	Yes
St. Mary's Hospital	Watertown	50	4	20	4	Yes
St. Mary's Hospital	Wausau	118	1	5	10	Yes
Wausau Mem. Hosp.	Wausau	98	4	24	8	Yes
Milwaukee Co. Hosp.	Wauwatosa	308	1	68	20	Yes
Whitehall Com. Hosp.	Whitehall	40	1	21	..	Yes
WYOMING						
Natrona Mem. Hosp.	Casper	90	4	22	1	Yes
Laramie County Memorial Hospital	Cheyenne	150	2	19	4	Yes
Lincoln County Miners Hospital	Kemerer	40	3	10	1	Yes
Wyoming Gen. Hosp.	Rock Springs	71	4	17	3	Yes
Sheridan County Memorial Hospital	Sheridan	53	2	18	4	Yes
Wheatland Gen. Hosp.	Wheatland	65	2	29	5	Yes

1. Colored.
2. For sister nurses of their order only.
3. Special hospital with affiliations for general training.
4. Includes Lane and Stanford University Hospitals.
5. Includes Highland Hospital of Alameda County, Oakland.
6. Includes Greeley Hospital.
7. Includes Robt. W. Long Hospital and James Whitcomb Riley Hospital for Children.
8. Dental nurses only.
9. Includes Thomas Tubercular Hospital.
10. Includes University Hospital, Minneapolis General Hospital, Charles T. Miller Hospital, Northern Pacific Beneficial Association Hospital.
11. Includes Kahler Hospital, Colonial Hospital and Worrell Hospital and Annex.
12. Includes Barnes Hospital and St. Louis Children's Hospital.
13. Includes Babies' and Children's Hospital, Cleveland Maternity Hospital and Lakeside Hospital.
14. Includes Crawford Allen Memorial Hospital.

* Not accredited until 1928.
** Accredited for one year.
† Affiliation required in order to be accredited.
†† One year affiliation or graduate work required in order to be accredited.
‡ Women.
‡‡ Men.
¶ On probation.
¶¶ Conditional.

II. HOSPITALS UTILIZED IN MEDICAL EDUCATION

The information here given shows the amazing extent to which hospitals are now utilized in medical education, as well as in medical practice. In respect to their use in medical education, the statistics are subdivided as follows: (1) hospitals related to undergraduate medical education; (2) hospitals approved for the training of interns; (3) hospitals approved for residencies in the various specialties (advanced internships), as well as for a higher knowledge and skill for general practice; (4) hospitals giving medical courses or affiliated with graduate medical schools, and (5) general statistics regarding hospitals in the United States and Canada.

1. HOSPITALS RELATED TO UNDERGRADUATE MEDICAL EDUCATION

This year, for the first time, a list of the hospitals related to undergraduate medical education is published on pages 814-816. In this list, the hospitals are named which, so far as is now known, have a direct relationship with the teaching of undergraduate medical students. After each hospital is shown the total number of beds, the degree to which the hospital serves in medical teaching, and the key number of the medical college which is making use of the hospital's clinical facilities. Immediately after the list for each state is given a list of the medical schools with which the hospitals are related.

As shown at the head of the list, the roman numerals indicate the degree to which the hospital's clinical facilities are being used in teaching: I. The hospital is both owned and controlled by the medical school. II. Although the hospital is not owned by the medical school, nevertheless the medical school has full privileges of utilizing the patients in the hospital for teaching, so far as the best welfare of the patients will permit. III. Not only are generous privileges extended to medical schools for teaching purposes but the clinical material is being extensively used by the medical school. IV. Either the medical school has only moderate privileges in the hospital, or such privileges, even though generous, are being used to only a moderate extent. V. Whether it is due to long distance from the medical school or for other reasons, only occasionally is use made of the clinical material in the hospital by the medical school.

The accompanying tabulation shows by states the number of hospitals included in each of the five groups, the total in each state and the total bed capacity.

There are forty-nine hospitals which are both owned and entirely controlled by the medical schools, and thirty-seven which represent an equivalent, since, although not owned by the medical school, the clinical material is fully controlled, and therefore an excellent routine of clinical instruction can be maintained. There are forty hospitals in which the material is generously used in medical teaching, fifty-nine in which material is moderately used, and 131 where clinics are held only occasionally. There are doubtless other hospitals which, because of their special type of patients or because of longer distance from the medical school, or for other reasons, may also be occasionally, but less seldom, used.

Many of the hospitals in group V are either limited to certain classes of patients, such as nervous and mental and tuberculosis, or located a long distance from the medical school.

Altogether, there are 316 hospitals listed which have a greater or less connection with undergraduate medical instruction—a great advance over conditions existing prior to 1900.

As shown in the tabulation, the total bed capacity of the 316 hospitals is 135,548 beds, or 16.9 per cent of the total bed capacity (802,065) of all hospitals in the United States—statistics of 1926.

The following list of hospitals related to undergraduate medical education, as would be expected, is found only in or near cities in which medical schools are located. Two hospitals in Council Bluffs, Iowa, are occasionally utilized for instruction by a medical school directly across the state line in Omaha, Neb.

The list shows also the medical school or schools with which each hospital has teaching relationships. The number used for each medical school, meanwhile, is the same as the key number used in the American Medical

Hospitals Related to Undergraduate Medical Education, Showing Extent of Relationship

State	I Owned and Controlled by Medical School	II Controlled But Not Owned	III Generously Used	IV Moderately Used	V Occasionally Used	Total Hospitals	Total Bed Capacity
Alabama	..	..	..	..	...	...	.....
Arizona	..	..	..	..	...	...	.....
Arkansas	..	..	..	3	2	5	3,111
California	4	1	2	1	...	8	3,450
Colorado	2	..	1	2	2	7	1,405
Connecticut	..	1	..	..	...	1	410
Delaware	..	..	..	..	...	...	.....
Dist. of Columbia	2	1	3	2	5	13	6,972
Florida	..	..	..	..	...	...	.....
Georgia	1	2	..	2	6	11	2,547
Idaho	..	..	..	..	...	...	.....
Illinois	3	5	3	4	13	28	8,593
Indiana	2	1	..	1	...	4	2,613
Iowa	2	..	..	..	2	4	1,166
Kansas	1	1	1	..	...	3	538
Kentucky	..	1	..	..	3	4	2,810
Louisiana	..	2	1	..	...	3	2,245
Maine	..	..	..	..	...	...	.....
Maryland	2	..	2	2	3	9	3,517
Massachusetts	2	1	3	6	7	19	7,389
Michigan	2	1	2	1	2	8	5,925
Minnesota	1	1	1	1	2	6	2,953
Mississippi	..	..	..	..	...	...	.....
Missouri	4	..	1	1	4	10	2,732
Montana	..	..	..	..	...	...	.....
Nebraska	1	1	1	3	3	9	1,519
Nevada	..	..	..	..	...	...	.....
New Hampshire	1	..	..	..	...	1	120
New Jersey	..	..	..	..	...	...	.....
New Mexico	..	..	..	..	...	...	.....
New York	5	7	7	6	32	57	34,632
North Carolina	..	..	..	..	...	...	.....
North Dakota	..	..	..	..	...	...	.....
Ohio	2	2	3	4	11	22	9,014
Oklahoma	1	..	1	1	1	4	1,900
Oregon	..	1	2	3	5	11	3,418
Pennsylvania	4	3	2	6	13	28	14,152
Rhode Island	..	..	..	..	...	...	.....
South Carolina	..	1	..	..	...	1	300
South Dakota	..	..	..	..	...	...	.....
Tennessee	2	1	1	3	4	11	3,051
Texas	1	1	2	2	2	8	1,515
Utah	..	..	..	..	...	...	.....
Vermont	..	1	..	1	1	3	1,159
Virginia	2	..	..	..	3	5	4,002
Washington	..	..	..	..	...	...	.....
West Virginia	..	..	..	..	...	...	.....
Wisconsin	2	1	1	4	5	13	2,359
Wyoming	..	..	..	..	...	...	.....
Totals	49	37	40	59	131	316	135,548

Directory. Some hospitals are related with two, three or even four medical schools. These relate either to large city or county hospitals; to special maternity, or children's hospitals, or to those for tuberculosis or contagious diseases.

There are many other hospitals having a great abundance of clinical material and in which privileges of medical instruction would be gladly provided, but which, unfortunately, are not near enough to some medical school. Through the larger development of the graduate medical education and the larger functions which hospitals are assuming in the education of the public in their communities, all hospitals sooner or later will have the opportunity of fulfilling a larger educational function, and this also will enable them to render a greater service to their patients.

TEACHING HOSPITALS IN MEDICAL SCHOOLS

The degree of teaching service is indicated by the roman numerals, which are explained as follows: I. Owned and controlled by the medical school. II. Controlled but not owned by medical school. III. Material generously used. IV. Material moderately used. V. Material occasionally used.

Hospitals	Bed Capacity	Degree of Teaching Service	Medical Colleges Using
ARKANSAS—5 Hospitals; 3,111 Beds			
Baptist State Hospital, Little Rock	325	IV	Ark. 1
Children's Hospital, Little Rock	70	V	Ark. 1
Little Rock General Hospital	116	IV	Ark. 1
State Hospital for Nervous Diseases (Ark. Hospital for the Insane), Little Rock	2,450	V	Ark. 1
St. Vincent's Infirmary, Little Rock	150	IV	Ark. 1
Ark. 1—University of Arkansas.			
CALIFORNIA—8 Hospitals; 3,450 Beds			
Hahnemann Hospital of the University of California, San Francisco	124	II	Cal. 2
Hospital for Children, San Francisco	275	IV	Cal. 2
Lane-Sanford Hospital, San Francisco	180	I	Cal. 11
Loma Linda Sanitarium and Hospital	155	I	Cal. 12
Los Angeles General Hospital	1,249	III	Cal. 12
San Francisco Hospital	1,075	III	Cal. 2, 11
University of California Hosp., San Francisco	283	I	Cal. 2
White Memorial Hospital, Los Angeles	109	I	Cal. 12
Cal. 2—University of California.			
Cal. 11—Stanford University.			
Cal. 12—College of Medical Evangelists.			
COLORADO—7 Hospitals; 1,405 Beds			
Children's Hospital, Denver	135	IV	Colo. 2
Colorado General Hospital, Denver	265	I	Colo. 2
Colorado Psychopathic Hospital, Denver	80	I	Colo. 2
Denver General Hospital, Denver	350	III	Colo. 2
National Jewish Hospital for Consumptives, Denver	270	V	Colo. 2
Steel Memorial Hospital, Denver (Contag.)	80	V	Colo. 2
St. Joseph's Hospital, Denver	225	IV	Colo. 2
Colo. 2—University of Colorado.			
CONNECTICUT—1 Hospital; 410 Beds			
New Haven General Hospital	410	II	Conn. 1
Conn. 1—Yale University.			
DISTRICT OF COLUMBIA—13 Hospitals; 6,972 Beds			
Casualty Hospital and Eastern Dispensary, Washington	60	V	D. C. 1
Children's Hospital, Washington	150	III	D. C. 1, 2
Columbia Hospital for Women, Washington	126	III	D. C. 1, 2
Emergency Hosp. & Cent. Disp., Washington	160	IV	D. C. 1
Episcopal Eye, Ear and Throat Hospital, Washington	100	IV	D. C. 1, 2
Freedmen's Hospital, Washington	302	II	D. C. 3
Gallinger Municipal Hospital, Washington	385	V	D. C. 1, 2
Garfield Memorial Hospital, Washington	350	III	D. C. 1, 2
Georgetown University Hospital, Washington	267	I	D. C. 2
George Washington Hospital, Washington	124	I	D. C. 1
Providence Hospital, Washington	350	V	D. C. 1, 2
St. Elizabeth's Hospital, Washington	4,418	V	D. C. 1
Tuberculosis Hospital, Washington	180	V	D. C. 2
D. C. 1—George Washington University.			
D. C. 2—Georgetown University.			
D. C. 3—Howard University.			
GEORGIA—11 Hospitals; 2,547 Beds			
Battle Hill Sanitarium, Atlanta	177	V	Ga. 5
Contagious Disease Hospital, Atlanta	40	IV	Ga. 5
Davis-Fischer Sanatorium, Atlanta	160	V	Ga. 5
Georgia Baptist Hospital, Atlanta	215	V	Ga. 5
Grady Memorial Hospital, Atlanta	465	II	Ga. 5
Piedmont Hospital, Atlanta	139	V	Ga. 5
St. Joseph's Infirmary, Atlanta	125	V	Ga. 5
University Hospital, Augusta	261	I	Ga. 1
U. S. Veterans' Hospital, No. 62, Augusta	574	V	Ga. 1
Wesley Memorial Hospital, Emory University	350	IV	Ga. 5
Wilhenford Children's Hospital, Augusta	50	II	Ga. 1
Ga. 1—University of Georgia.			
Ga. 5—Emory University.			
ILLINOIS—28 Hospitals; 8,593 Beds			
Annie W. Durand Hospital, Chicago	60	I	Ill. 1
Augustana Hospital, Chicago	276	III	Ill. 11
Billings Memorial Hospital, Chicago (Est.)	216	I	Ill. 1
Chicago Lying-In Hospital and Dispensary	260	V	Ill. 6
Children's Memorial Hospital, Chicago	250	II	Ill. 1
Cook County Hospital, Chicago	2,500	III	Ill. 1, 6, 11, 43
Country Home for Convalescent Children, Prince Crossing	100	V	Ill. 1
Grant Hospital, Chicago	180	V	Ill. 11
Henrotin Hospital, Chicago	83	V	Ill. 11
Home for Destitute Crippled Child'n, Chicago	107	II	Ill. 1
Illinois Eye and Ear Infirmary, Chicago	135	V	Ill. 1, 11, 43
Isolation Hospital, Chicago	35	V	Ill. 1
Mercy Hospital, Chicago	400	II	Ill. 43
Michael Reese Hospital, Chicago	489	IV	Ill. 6, 11
Misericordia Hospital, Chicago	30	V	Ill. 43
Mt. Sinai Hospital, Chicago	105	V	Ill. 11
Municipal Contagious Disease Hosp., Chicago	300	V	Ill. 43
Presbyterian Hospital, Chicago	425	II	Ill. 1
Research and Educational Hospital (University of Illinois)	150	I	Ill. 11
St. Anthony de Padua Hospital, Chicago	234	V	Ill. 1, 11
St. Bernard's Hospital, Chicago	225	V	Ill. 43
St. Elizabeth's Hospital, Chicago	225	IV	Ill. 11
St. Joseph's Hospital, Chicago	240	IV	Ill. 1, 11
St. Luke's Hospital, Chicago	743	III	Ill. 1, 6, 11
St. Mary of Nazareth Hospital, Chicago	235	V	Ill. 11, 43
University Hospital, Chicago	139	IV	Ill. 11
Wesley Memorial Hospital, Chicago	275	II	Ill. 6
West Side Hospital, Chicago	185	V	Ill. 11
Ill. 1—Rush Medical College.			
Ill. 6—Northwestern University.			
Ill. 11—University of Illinois.			
Ill. 43—Loyola University.			
INDIANA—4 Hospitals; 2,613 Beds			
Central Indiana Hospital for the Insane, Indianapolis	1,722	IV	Ind. 20
Indianapolis City Hospital	625	II	Ind. 20
James Whitcomb Riley Hospital for Children, Indianapolis	150	I	Ind. 20
Robert W. Long Hospital, Indianapolis	116	I	Ind. 20
Ind. 20—Indiana University.			
IOWA—4 Hospitals; 1,166 Beds			
Iowa State Psychopathic Hospital, Iowa City	60	I	Ia. 3
Mercy Hospital, Council Bluffs	112	V	Neb. 6
St. Bernard's Hospital, Council Bluffs	250	V	Neb. 6
University Hospital, Iowa City	744	I	Ia. 3
Ia. 3—State University of Iowa.			
Neb. 6—Creighton University.			
KANSAS—3 Hospitals; 538 Beds			
Bell Memorial Hospital, Kansas City	120	II	Kan. 2
St. Margaret's Hospital, Kansas City	400	III	Kan. 2
University Infirmary, Lawrence	18	I	Kan. 2
Kan. 2—University of Kansas.			
KENTUCKY—4 Hospitals; 2,810 Beds			
Central State Hospital, Lakeland	1,875	V	Ky. 2
Louisville City Hospital, Louisville	400	II	Ky. 2
Kentucky State Tuberculosis Hosp., Louisville	100	V	Ky. 2
Waverly Hill Sanatorium, Valley Station	435	V	Ky. 2
Ky. 2—University of Louisville.			
LOUISIANA—3 Hospitals; 2,245 Beds			
Charity Hospital, New Orleans	1,569	II	La. 1
Hotel Dieu, New Orleans	279	III	La. 1
Tuoro Infirmary, New Orleans	407	II	La. 1
La. 1—Tulane University.			
MARYLAND—9 Hospitals; 3,517 Beds			
Baltimore City Hospital	460	III	Md. 1
Bay View Hospitals (Municipal Tuberculosis Hospital Department, City Detention Hospital for the Insane Dept.) Baltimore	475	V	Md. 7
James Lawrence Kernan Hospital, Baltimore	110	IV	Md. 1
Johns Hopkins Hospital, Baltimore	723	I	Md. 7
Mercy Hospital, Baltimore	279	III	Md. 1
Sheppard and Enoch Pratt Hosp., Baltimore	165	V	Md. 1
Spring Grove State Hospital, Catonsville	1,000	V	Md. 1
St. Vincent's Infant Asylum, Baltimore	25	IV	Md. 1
University of Maryland Hospital, Baltimore	280	I	Md. 1
Md. 1—University of Maryland.			
Md. 7—Johns Hopkins University.			

Teaching Hospitals in Medical Schools—Continued

Hospitals	Bed Capacity	Degree of Teaching Service	Medical Colleges Using
MASSACHUSETTS—19 Hospitals; 7,329 Beds			
Boston City Hospital	834	III	Mass. 1, 5, 7
Boston Lying-in Hospital, Boston	214	V	Mass. 1
Boston Psychopathic Hospital, Boston	110	IV	Mass. 1, 5
Boston Sanatorium, Boston	122	V	Mass. 1, 7
Boston State Hospital, Boston	2,120	V	Mass. 7
Carney Hospital, Boston	220	IV	Mass. 7
Children's Hospital, Boston	277	IV	Mass. 1
Collis P. Huntington Memorial Hosp., Boston	25	I	Mass. 1
Evangeline Booth Home and Maternity Hospital, Boston	55	V	Mass. 7
Free Hospital for Women, Brookline	97	V	Mass. 1
Infant's Hospital, Boston	65	IV	Mass. 1
Massachusetts Eye and Ear Infirmary, Boston	209	IV	Mass. 1, 7
Massachusetts General Hospital, Boston	425	III	Mass. 1, 7
Massachusetts Homeopathic Hospital, Boston	534	I	Mass. 5
New England Hospital for Women and Children, Boston	227	IV	Mass. 7
Peter Bent Brigham Hospital, Boston	223	II	Mass. 1
Robert Breck Brigham Hospital, Boston	110	III	Mass. 7
Roxbury Hospital, Boston	62	V	Mass. 7
Westboro State Hospital, Westboro	1,400	V	Mass. 5
Mass. 1—Harvard University.			
Mass. 5—Boston University.			
Mass. 7—Tufts College Medical School.			
MICHIGAN—8 Hospitals; 5,926 Beds			
Children's Hospital, Detroit	250	IV	Mich. 1, 7
Detroit Tuberculosis Hospital, Detroit	145	V	Mich. 7
Eloise Hospital and Infirmary, Eloise (Wayne			
Herman Kiefer Hospital, Detroit	700	III	Mich. 7
Receiving Hospital, Detroit	565	II	Mich. 7
State Psychopathic Hospital, Ann Arbor	62	I	Mich. 1
St. Mary's Hospital, Detroit	330	III	Mich. 7
University Hospital, Ann Arbor	1,100	I	Mich. 1
County)	2,774	V	Mich. 7
Mich. 1—University of Michigan.			
Mich. 7—Detroit College of Medicine and Surgery.			
MINNESOTA—6 Hospitals; 2,953 Beds			
Ancker Hospital, St. Paul	850	III	Minn. 4
Charles T. Miller Hospital, St. Paul	216	V	Minn. 4
Gillette State Hospital for Crippled Children, St. Paul	250	IV	Minn. 4
Glen Lake Sanatorium, Oak Terrace	676	V	Minn. 4
Minneapolis General Hospital	689	II	Minn. 4
University Hospital, Minneapolis	292	I	Minn. 4
Minn. 4—University of Minnesota.			
MISSOURI—10 Hospitals; 2,732 Beds			
Alexian Brothers Hospital, St. Louis	250	IV	Mo. 34
Barnes Hospital, St. Louis	324	I	Mo. 2
St. Ann's Maternity Hospital, St. Louis	50	V	Mo. 34
St. Anthony's Hospital, St. Louis	100	V	Mo. 34
St. John's Hospital, St. Louis	275	V	Mo. 34
St. Louis Children's Hospital, St. Louis	203	I	Mo. 2
St. Louis City Hospital, St. Louis	700	III	Mo. 2, 34
St. Louis Isolation Hospital, St. Louis	200	V	Mo. 34
University Hospital, Columbia	80	I	Mo. 3
University Hospital, St. Louis (embracing St. Mary's Hospital, St. Mary's Infirmary and Mt. St. Rose Hospital)	550	I	Mo. 34
Mo. 2—Washington University.			
Mo. 3—University of Missouri.			
Mo. 34—St. Louis University.			
NEBRASKA—9 Hospitals; 1,519 Beds			
Bishop Clarkson Memorial Hospital, Omaha	100	IV	Neb. 5
City Emergency Hospital, Omaha	40	V	Neb. 5, 6
Douglas County Hospital, Omaha	188	III	Neb. 5, 6
Evangelical Covenant Hospital, Omaha	90	V	Neb. 5
Immanuel Deaconness Institute, Omaha	125	V	Neb. 5
Nebraska Methodist Episcopal Hosp., Omaha	325	IV	Neb. 5
St. Joseph's Hospital, Omaha	420	II	Neb. 6
University of Nebraska Hospital, Omaha	146	I	Neb. 5
Wise Memorial Hospital, Omaha	85	IV	Neb. 5
Neb. 5—University of Nebraska.			
Neb. 6—Creighton University.			
NEW HAMPSHIRE—1 Hospital; 120 Beds			
Mary Hitchcock Memorial Hospital, Hanover	120	I	N. H. 1
N. H. 1—Dartmouth Medical School.			
NEW YORK—57 Hospitals; 34,632 Beds			
Albany County Hospital, Albany	70	IV	N. Y. 3
Albany Hospital, Albany	425	II	N. Y. 3
Albany Hospital for Incurables, Albany	100	V	N. Y. 3
Anthony N. Brady Maternity Hosp., Albany	102	V	N. Y. 3
Babies Hospital, New York City	80	II	N. Y. 1
Bellevue Hospital, New York City	1,707	III	N. Y. 1, 19, 20
Brooklyn Eye and Ear Hospital, Brooklyn	76	V	N. Y. 8
Buffalo City Hospital	863	II	N. Y. 6
Buffalo General Hospital	400	III	N. Y. 6
Buffalo State Hospital	2,200	V	N. Y. 6
Children's Hospital, Buffalo	135	IV	N. Y. 6
Child's Hospital, Albany	60	IV	N. Y. 3
City Hospital, Syracuse	162	III	N. Y. 15
Craig Colony for Epileptics, Sonyea	1,500	V	N. Y. 15
Deaconess Hospital, Buffalo	204	V	N. Y. 6
Ellis Hospital, Schenectady	275	V	N. Y. 3
Emergency Hospital of Sisters of Charity, Buffalo	100	V	N. Y. 6
Erie County Home and Infirmary, Milgrove	300	V	N. Y. 6
Greenpoint Hospital, Brooklyn	264	IV	N. Y. 8
Herman Knapp Memorial Eye Hospital, New York City	50	V	N. Y. 1
Hospital of the Good Shepherd, Syracuse	257	II	N. Y. 15
Jewish Hospital, Brooklyn	265	III	N. Y. 8
Kings County Hospital, Brooklyn	1,809	II	N. Y. 8
Lincoln Hospital and Home, New York City	331	V	N. Y. 1
Long Island College Hospital, Brooklyn	470	I	N. Y. 8
Manhattan State Hospital, New York City	6,613	V	N. Y. 20
Memorial Hospital, New York City	104	V	N. Y. 20
Metropolitan Hospital, New York City	1,600	III	N. Y. 9
Monroe County Hospital, Rochester	251	V	N. Y. 45
Monroe County Tuberculosis Sanatorium, Rochester	284	V	N. Y. 45
Montefiore Hospital for Chronic Diseases, New York City	580	V	N. Y. 1
Neurological Institute, New York City	85	V	N. Y. 20
New York City Hospital, Welfare Island, New York City	1,030	V	N. Y. 1
New York Eye and Ear Infirmary, New York City	175	V	N. Y. 1
New York Homeopathic Medical College and Flower Hospital, New York City	229	I	N. Y. 9
New York Hospital, New York City	304	II	N. Y. 1, 20
New York Nursery and Child's Hospital, New York City	268	V	N. Y. 20
New York Ophthalmic Hospital, New York City (H)	47	IV	N. Y. 9
New York Orthopedic Hosp., New York City	300	V	N. Y. 1
New York State Hospital for Feebleminded, Rome	2,400	V	N. Y. 15
Onondago County Tuberculosis Sanatorium, Syracuse	166	V	N. Y. 15
Presbyterian Hospital, New York City	253	I	N. Y. 1
Rochester Municipal Hospital, Rochester	225	II	N. Y. 45
Rochester State Hospital, Rochester	1,700	V	N. Y. 45
Roosevelt Hospital, New York City	377	III	N. Y. 1
Samaritan Hospital, Troy	180	V	N. Y. 3
Sloane Hospital for Women, New York City	285	I	N. Y. 1
St. Catharine's Hospital, Brooklyn	200	V	N. Y. 8
St. Joseph's Hospital, Syracuse	235	IV	N. Y. 15
St. Luke's Hospital, New York City	417	V	N. Y. 1
St. Margaret's House and Hospital, Albany	55	V	N. Y. 3
St. Mary's Free Hospital for Children, New York City	140	V	N. Y. 1
St. Mary's Hospital, Buffalo (Mat.)	144	V	N. Y. 6
Strong Memorial Hospital, Rochester	276	I	N. Y. 45
Syracuse Memorial Hospital	160	III	N. Y. 15
Utica State Hospital, Utica	2,500	V	N. Y. 15
Willard Parker (and Reception) Hospital, New York City	625	V	N. Y. 1
N. Y. 1—Columbia University.			
N. Y. 3—Albany Medical College.			
N. Y. 6—University of Buffalo.			
N. Y. 8—Long Island College Hospital.			
N. Y. 9—New York Homeopathic Medical College.			
N. Y. 15—Syracuse University.			
N. Y. 19—University and Bellevue Hospital Medical College			
N. Y. 20—Cornell University.			
N. Y. 45—University of Rochester.			
OHIO—22 Hospitals; 9,014 Beds			
Babies and Children's Hospital, Cleveland	157	IV	O. 6
Bethesda Hospital, Cincinnati	299	V	O. 2, 41
Children's Hospital, Cincinnati	85	IV	O. 41
Children's Hospital, Columbus	75	IV	O. 40
Cincinnati General Hospital	800	II	O. 41
Cincinnati Tuberculosis Hospital	294	V	O. 41
Cleveland City Hospital	1,100	III	O. 6
Cleveland Maternity Hospital	150	V	O. 6
Columbus Hospital (State)	2,150	V	O. 40
Elizabeth Home, Columbus	14	V	O. 40
Florence Crittenton Home, Columbus	28	V	O. 40
Franklin County Sanatorium, Columbus	210	V	O. 40
Friends' Rescue Home, Columbus	26	V	O. 40
Good Samaritan Hospital, Cincinnati	210	V	O. 41
Jewish Hospital, Cincinnati	277	III	O. 41
Lakeside Hospital, Cleveland	252	I	O. 6
Longview Hospital, Cincinnati	2,100	V	O. 2, 41
Mary Price Home (Colored), Columbus (Est.)	10	V	O. 40
Rainbow Hospital for Crippled Children and Convalescent Children, South Euclid	100	IV	O. 6
Starling-Loving University Hosp., Columbus	187	I	O. 40
St. Francis Hospital, Columbus	160	III	O. 40
St. Vincent's Charity Hospital, Cleveland	300	II	O. 6
O. 2—Eclectic Medical College.			
O. 6—Western Reserve University.			
O. 40—Ohio State University.			
O. 41—University of Cincinnati.			
OKLAHOMA—4 Hospitals; 1,990 Beds			
Central Oklahoma Hospital for the Insane, Norman	1,500	V	Okla. 1
Holmes Home of Redeeming Love, Oklahoma City	24	IV	Okla. 1
St. Anthony's Hospital, Oklahoma City	180	III	Okla. 1
University Hospital, Oklahoma City	283	I	Okla. 1
Okla. 1—University of Oklahoma.			

Teaching Hospitals in Medical Schools—Continued

Hospitals	Bed Capacity	Degree of Teaching Service	Medical Colleges Using
OREGON—11 Hospitals; 3,418 Beds			
Doernbecher Memorial Hospital for Children, Portland	75	V	Ore. 2
Emanuel Hospital, Portland	125	V	Ore. 2
Good Samaritan Hospital, Portland	334	III	Ore. 2
Multnomah County Hospital, Portland	200	II	Ore. 2
Oregon State Hospital, Salem	1,926	V	Ore. 2
Portland Medical Hospital	35	IV	Ore. 2
Portland Sanitarium	124	V	Ore. 2
Portland Surgical Hospital	84	V	Ore. 2
Salvation Army White Shield Home, Portland	45	IV	Ore. 2
St. Vincent's Hospital, Portland	400	III	Ore. 2
Waverly Baby Home, Portland	70	IV	Ore. 2
Ore. 2—University of Oregon.			
PENNSYLVANIA—28 Hospitals; 14,152 Beds			
Allegheny General Hospital, Pittsburgh	405	V	Pa. 12
Allentown Hospital (H), Allentown	225	V	Pa. 9
Children's Homeopathic Hosp., Philadelphia	105	IV	Pa. 9
Children's Hospital, Philadelphia	102	IV	Pa. 1, 2, 7
Children' Hospital, Pittsburgh	215	IV	Pa. 12
Elizabeth Steel Magee Hospital, Pittsburgh	215	IV	Pa. 12
Eye and Ear Hospital, Pittsburgh	55	V	Pa. 12
Garretson Hospital, Philadelphia	90	I	Pa. 13
Greatheart Hospital, Philadelphia (Est.)	52	V	Pa. 13
Hahnemann Hospital, Philadelphia	409	I	Pa. 9
Hospital of the University of Pennsylvania, Philadelphia	572	I	Pa. 1, 2, 7
Jefferson Medical College Hosp., Philadelphia	635	I	Pa. 2
Lankenau Hospital, Philadelphia	276	IV	Pa. 2, 7
Mercy Hospital, Pittsburgh	600	III	Pa. 12
Methodist Episcopal Hospital, Philadelphia	302	V	Pa. 1, 2
Municipal Hospital, Pittsburgh	250	V	Pa. 12
Philadelphia General Hospital	2,275	III	Pa. 1, 2, 7
Philadelphia Hospital for Contagious Diseases	1,200	V	Pa. 2
Philadelphia Hospital for Mental Diseases	4,200	V	Pa. 1
Philadelphia Orthopedic Hospital	136	V	Pa. 2
Samaritan Hospital, Philadelphia	266	II	Pa. 13
St. Agnes Hospital, Philadelphia	331	IV	Pa. 2
St. Francis Hospital, Pittsburgh	600	II	Pa. 12
St. Joseph's Hospital, Philadelphia	175	V	Pa. 2
St. Luke's Homeopathic Hosp., Philadelphia	54	V	Pa. 9
Tuberculosis League Hospital, Pittsburgh	120	V	Pa. 12
Wills Hospital, Philadelphia	112	V	Pa. 2, 7
Woman's Hospital, Philadelphia	185	II	Pa. 7
Pa. 1—University of Pennsylvania.			
Pa. 2—Jefferson Medical College.			
Pa. 7—Woman's Medical College.			
Pa. 9—Hahnemann Medical College.			
Pa. 12—University of Pittsburgh.			
Pa. 13—Temple University.			
SOUTH CAROLINA—1 Hosptial; 300 Beds			
Roper Hospital, Charleston	300	II	S. C. 1
S. C. 1—Medical College of the State of South Carolina			
TENNESSEE—11 Hospitals; 3,051 Beds			
Baptist Hospital, Nashville	75	V	Tenn. 5
Baptist Memorial Hospital, Memphis	350	IV	Tenn. 6
Central State Hospital, Nashville	1,200	V	Tenn. 5, 7
Davidson County Isolation Hosp., Nashville	40	V	Tenn. 5
Davidson County Tuberculosis Sanitarium, Nashville	178	V	Tenn. 5, 7
George W. Hubbard Hospital, Nashville	140	I	Tenn. 7
Memphis General Hospital, Memphis	380	II	Tenn. 6
Millie E. Hale Hospital, Nashville	60	IV	Tenn. 7
Nashville City Hospital	190	III	Tenn. 5
St. Thomas Hospital, Nashville	222	IV	Tenn. 5
Vanderbilt University Hospital, Nashville	216	I	Tenn. 5
Tenn. 5—Vanderbilt University.			
Tenn. 6—University of Tennessee.			
Tenn. 7—Meharry Medical College.			
TEXAS—8 Hospitals; 1,515 Beds			
Baylor Hospital, Dallas	414	I	Tex. 4
Dallas Baby Hospital	50	IV	Tex. 4
Hope Cottage, Dallas	75	V	Tex. 4
John Sealy Hospital, Galveston	320	II	Tex. 4
Parkland Hospital, Dallas	274	III	Tex. 4
St. Mary's Infirmary, Galveston	212	III	Tex. 2
Texas Scottish Rite Hospital for Crippled Children, Dallas	50	IV	Tex. 4
Woodlawn Sanatorium, Dallas	120	V	Tex. 4
Tex. 2—University of Texas.			
Tex. 4—Baylor University.			
VERMONT—3 Hospitals; 1,139 Beds			
Fanny Allen Hospital, Winooski	64	IV	Vt. 2
Mary Fletcher Hospital, Burlington	145	II	Vt. 2
Vermont State Hospital for the Insane, Waterbury	950	V	Vt. 2
Vt. 2—University of Vermont.			
VIRGINIA—5 Hospitals; 4,002 Beds			
Blue Ridge Sanitarium, Charlottesville	260	V	Va. 1
Central State Hospital, Petersburg (Colored)	2,000	V	Va. 4
Eastern State Hospital, Williamsburg	1,000	V	Va. 4
Medical College of Virginia Hospital Divsion, Richmond (embracing Memorial, Dooley and St. Philip's Hospitals)	424	I	Va. 4
University of Virginia Hospital, University	318	I	Va. 1
Va. 1—University of Virginia.			
Va. 4—Medical College of Virginia.			
WISCONSIN—13 Hospitals; 2,359 Beds			
East Washington Hospital, Madison	50	V	Wis. 5
Madison General Hospital	150	IV	Wis. 5
Madison Methodist Hospital	50	V	Wis. 5
Marquette University Hospital, Milwaukee	179	I	Wis. 6
Milwaukee County Hospital, Wauwatosa	308	III	Wis. 6
Milwaukee Maternity Hospital	100	IV	Wis. 6
Misericordia Hospital, Milwaukee	136	IV	Wis. 6
Muirdale Sanatorium, Wauwatosa	350	IV	Wis. 6
South View Hospital, Milwaukee	190	V	Wis. 6
State of Wisconsin General Hospital, Madison	450	I	Wis. 5
St. Joseph's Hospital, Milwaukee	156	II	Wis. 6
St. Mary's Hospital, Madison	200	V	Wis. 5
Wisconsin Psychiatric Institute, Mendota	40	V	Wis. 5
Wis. 5—University of Wisconsin.			
Wis. 6—Marquette University.			
Total—316 Hospitals; 135,548 Beds.			

2. HOSPITALS APPROVED FOR INTERN TRAINING

The latest revision of the list of hospitals approved for the training of interns appears on page 818. As noted, the list contains 578 hospitals, which have a total capacity of 160,886 beds and provide 4,952 internships. This is a net increase of seventy hospitals since 1914. The first edition of the list in the former year contained 508 hospitals, or all reputable institutions willing to use interns. Since then 189 hospitals have been dropped for various reasons, chiefly because a satisfactory training was not provided for their interns. Since 1914, also, 259 hospitals have been added to the list, including sixty-six which were reinstated. At present no hospital is added to the approved list until the character of training provided for its interns is carefully investigated.

INTERNS' SALARIES

The number of hospitals that do not pay salaries to interns has decreased from 195 in 1923 to 184 in 1927. During the same time the number of interns not drawing salaries has increased from 1,660 to 2,541. This seeming paradox is due to the fact that most of the hospitals recently added to the list are comparatively small institutions that have not developed the prestige necessary to obtain interns on their reputation as teaching institutions. On the other hand, the larger hospitals with established reputations easily secure interns without paying salaries.

Salaries of Interns in Approved Hospitals

	No. of Hospitals			Number of Interns		
	1923	1925	1927	1923	1925	1927
No salary	195	192	184	1,660	2,187	2,541
$25 per month or less	151	148	201	907	905	1,446
$26 to $50 per month	96	95	130	323	379	567
$51 to $100 per month	15	15	9	44	42	28
Over $100 per month	2	3	20	27	40	178
Salary and bonus	...	8	23	.....	50	145
Bonus only	5	6	1	24	37	5
Fees only	3	1	...	10	8	.....
Salary and accident fees	...	...	1	.....	.....	9
No fixed amount	23	22	...	78	87	.....
Varies each 3 or 6 months	...	...	8	.....	.....	31
Do not say	20	34	1	46	90	2
Totals	510	524	578	3,119	3,825	4,952

The increase in the number of hospitals paying small salaries with a bonus for satisfactory service at the end of the internship is to be commended. Such practice for faithful work will help prevent breaking of contracts and reduce the tendency of certain interns to leave hospitals without completing their service.

LENGTH OF INTERNSHIPS IN APPROVED HOSPITALS

The length of internship in approved hospitals is twelve months in 487, or 84 per cent of all the hospitals approved for internship, as compared with 396, or 78 per cent of all the approved hospitals in 1923.

The number of hospitals that have internships longer than twelve months shows a marked decrease, but this does not mean that less time is being spent in hospitals in preparation for the practice of medicine; rather it shows that the twelve months' internship is increasing in popularity as a prerequisite for an advanced internship, or residency in a specialty.

Length of Internships in Approved Hospitals

Length in Months	Hospitals		Per Cent of Approved Hospitals	
	1923	1927	1923	1927
12	396	487	78	84
18	24	18	4	3
24	34	33	7	6
Varies	56	40	11	7
	510	578	100	100

Of the 578 hospitals approved for the training of interns, 325, or 56.2 per cent, require the interns to do service in the outpatient department, while seventy-one, or 12.3 per cent, leave such service optional, and in two other hospitals such service is by special arrangement.

REQUIREMENTS FOR APPROVAL OF INTERN TRAINING

The requirements in a hospital approved for intern training are set forth in a schedule of "essentials," a revised edition of which is pubished on page 825. The requirements in this schedule have been strengthened materially since they were first established in 1919. A complete revision was made in 1925. In 1926 a clause was adopted specifying that graduates of medical schools rated lower than classes A and B should not be accepted. Just recently the Council adopted a requirement that after Jan. 1, 1928, a hospital must have a record of necropsies on at least 10 per cent of deaths occurring in the hospital, and that after Jan. 1, 1929, a record of 15 per cent will be required.

ROUTINE MEASURES BEFORE APPROVAL

In considering a hospital seeking approval for the training of interns, information is obtained by the Council from several different sources: (*a*) The hospital survey blank, supplied by the Council, is filled out by the hospital covering all essential phases of the hospital's equipment and activities; (*b*) the qualifications of the physicians on the staff and of those permitted to use the hospital are carefully looked up in the biographic files of the Association; (*c*) the accumulated information regarding the reputation and conduct of the hospital is reviewed; (*d*) reports regarding the hospital are obtained from physicians who have recently served the hospital as interns, and (*e*) the hospital is then inspected either by a member of the Council's staff, or through the advisory committee of the state in which the hospital is located.

From the reliable information obtained through such sources, the Council is enabled to decide with fair accuracy whether each hospital is in a position to furnish recent graduates in medicine an internship that is in fact a fifth year of properly supervised clinical instruction.

RECOGNITION

The Council's list of hospitals approved for intern training has come to be generally recognized by the licensing boards in the several states which require an internship as a qualification for the license, and also by the National Board of Medical Examiners for the final examination of which an internship is necessary.

NECROPSIES ESSENTIAL IN EVERY APPROVED HOSPITAL

As hospitals have increased in efficiency during the last quarter century, necropsies have come to be recognized more and more as essential. It is equally essential also that a progressive hospital have on its staff a competent and skilled pathologist. The holding of necropsies, especially if coupled, as they should be, with staff conferences, enables members of the attending staff to verify their diagnoses and clinical observations and to speak with certainty regarding the primary and secondary causes of death. Through such necropsies, therefore, physicians learn how to interpret antemortem symptoms and signs more accurately and to note other pathologic conditions the presence of which may not have been even suspected. As a result of the broader knowledge attained by physicians through such necropsies, therefore, not only do physicians become more skilled, but also methods of treatment may be found to relieve or prevent such complications in other patients and the public will be better served.

At the staff conferences not only the attending staff but interns and medical students also, if the institution is a teaching hospital, should be in attendance. In some hospitals also other physicians of the community are invited to attend. So important have been the results of necropsies that the percentage of necropsies in a hospital has come to be regarded as an index of the hospital's progressive educational activities. A recent investigation of the percentages of necropsies in hospitals approved for interns resulted in the following figures:

Proportion of Necropsies to Deaths

Percentage of Necrop.	No. of Hosps.	Percentage of Necrop.	No. of Hosps.	Percentage of Necrop.	No. of Hosps.
100 - 90	3	39 - 30	42	None	5
89 - 80	2	29 - 20	91	No record	3
79 - 70	9	19 - 15	55	Not reporting	14
69 - 60	13	14 - 10	107		
59 - 50	8	9 - 5	120	Total	578
49 - 40	26	4 - 1	80		

Because of their importance in every progressive hospital, the Council's policy is to increase gradually the requirements in regard to necropsies. A ruling has recently been adopted that after Jan. 1, 1928, no hospital will be continued as approved for the training of interns unless necropsies are held on at least 10 per cent of the deaths occurring in the hospital, and, after Jan. 1, 1929, this requirement will be further increased to 15 per cent. In the meantime the rating of any hospital will depend to a considerable extent on the character of its clinical laboratory work, including necropsies.

HOSPITALS APPROVED FOR INTERNSHIPS

By the Council on Medical Education and Hospitals of the American Medical Association, 535 North Dearborn Street, Chicago

Revised to March 12, 1927

The following general hospitals containing 160,886 beds are considered in position to furnish acceptable internships for medical graduates. For list of approved graduate medical schools send 10 cents; for list of hospitals providing approved residencies in certain specialties, send 15 cents.

The "Essentials in a Hospital Approved for Interns" will be found on page 825.

HOSPITALS, 578, INTERNSHIPS, 4,952

Name of Hospital	Location	Number of Beds						Affiliated—For What Service	Internships					
		Surgical	Medical	Obstetric	Pediatric	Other	Total		Number	By Examination or Appointment	Length of Service in Months	Begin	Salary per Month	Dispensary Service
ALABAMA														
Hillman Hospital	Birmingham	40	34	20	20	46	160	No	12	Ap.	12	July	$25 (a)	Req.
Employees' Hospital of the Tennessee Coal, Iron & R. R. Co.	Fairfield	104	100	20	48	38	310	No	10	Ap.	12	July	$50	Req.
John A. Andrews Memorial Hospital [1] (col.)	Tuskegee Institute	22	40	8	5	..	75	No	2	Ap.	12	July & Oct.	$ 6	Req.
ARKANSAS														
St. Vincent's Infirmary	Little Rock	yes	yes	yes	yes	yes	150	No	2	Ap.	12	July	$50	.....
CALIFORNIA														
General Hospital of Fresno County	Fresno	74	69	15	30	158	346	No	8	Ap.	12	July	$25	Req.
Loma Linda Sanitarium and Hospital	Loma Linda	yes	yes	yes	yes	yes	155	No	2	Ap.	12	June	$75	Op.
Seaside Hospital	Long Beach	60	35	45	10	28	178	No	5	Ap.	12	July & Oct.	$30	Req.
California Lutheran Hospital	Los Angeles	215	50	60	25	..	350	(3)	10	Ap.	12	July	$25	Req.
Hollywood Hospital	Los Angeles	90	14	35	..	..	139	(4)	2	Ap.	12	July	$50	None
Los Angeles General Hospital [1]	Los Angeles	410	768	75	30	..	1,283	No	60	Ex.	*	¶¶	$20	Op.
Methodist Hospital of Southern California	Los Angeles	yes	yes	52	12	..	225	No	6	Ap.	12	Jan. & Aug.	$25	Op.
Santa Fe Coast Lines Hospital	Los Angeles	97	53	..	..	..	150	(5)	4	Ap.	12	July	$25	Req.
St. Vincent's Hospital	Los Angeles	65	30	28	..	..	123	No	3	Ap.	12	July	$50	None
White Memorial Hospital [1]	Los Angeles	49	33	19	8	25	134	(6)	12	Ap.	12	July	$10	Req.
U. S. Naval Hospital	Mare Island	107	347	..	..	143	597	(7)	6	Ap.	12	July	(b)	None
Alameda County Hospitals [1]	Oakland	yes	yes	yes	yes	yes	900	(14)	16	Ap.	12	July & Aug.	$25	.....
Fabiola Hospital [1]	Oakland	63	25	50	25	50	213	No	2	Ap.	12	July	$25	Req.
The Samuel Merritt Hospital	Oakland	yes	yes	22	8	89	131	No	2	Ap.	12	June	$25	None
Mater Misericordiae Hospital	Sacramento	54	30	26	16	24	150	No	2	Ap.	12	Jan.	No	None
San Bernardino County Hospital	San Bernardino	30	26	20	22	144	242	No	4	Ap.	12	July	$50	Req.
San Diego County General Hospital	San Diego	110	156	40	59	160	516	No	10	Ap.	12	July	(c)	Req.
U. S. Naval Hospital	San Diego	305	342	..	..	163	810	(8)	10	Ex.	12	July	(b)	Req.
Franklin Hospital	San Francisco	yes	yes	yes	yes	yes	215	No	6	Ap.	12	July	$35	Req.
French Hospital [1]	San Francisco	75	80	16	16	38	225	No	5	Ap.	12	July	$50	.....
Hahnemann Hospital of the Univ. of Calif.	San Francisco	yes	yes	yes	yes	yes	124	(9)	3	Ap.	12	June	No	.....
Hospital for Children [2]	San Francisco	75	50	35	100	15	275	No	12	Ap.	12	July	$10	Req.
Lane and Stanford University Hospitals [1]	San Francisco	yes	yes	yes	yes	yes	296	(11)	(d)	Ap.	12-24	July & Aug.	(e)	Req.
Letterman General Hospital	San Francisco	416	380	10	10	..	1,016	No	15	Ap.	12	Aug.	(b)	Op.
Mary's Help Hospital	San Francisco	yes	yes	yes	yes	yes	160	No	2	Ap.	12	July	$50	Req.
Mount Zion Hospital	San Francisco	yes	yes	yes	yes	yes	180	No	6	Ap.	12	June	$10	Req.
San Francisco Hospital [1]	San Francisco	yes	yes	yes	yes	yes	1,075	No	31	Ap.	12	June & July	$10	None
Southern Pacific General Hospital	San Francisco	yes	yes	yes	yes	yes	300	(12)	6	Ap.	12	July	$30	Req.
St. Joseph's Hospital	San Francisco	64	42	23	8	63	200	No	3	Ap.	12	Jan. & July	$50	None
St. Luke's Hospital [1]	San Francisco	yes	yes	18	16	..	203	No	6	Ap.	12	July	$15 (f)	Req.
St. Mary's Hospital	San Francisco	yes	yes	yes	yes	yes	225	No	4	Ap.	12	July	$25	Req.
U. S. Marine Hospital No. 19	San Francisco	114	137	..	..	69	320	(13)	4	Ap.	12	July	(b)	Req.
University of California Hospital [1]	San Francisco	82	54	54	68	25	283	No	18	Ap.	12	June	No	Req.
Santa Barbara Cottage Hospital	Santa Barbara	yes	yes	yes	yes	yes	145	No	4	Ap	12	July	$20	Req.
St. Francis Hospital	Santa Barbara	35	30	15	5	15	100	No	1	Ap.	12	July	$25 (g)	Req.
COLORADO														
St. Francis Hospital	Colorado Springs	60	50	16	12	12	150	No	1	Ap.	12	June	$25	Op.
Children's Hospital [1]	Denver	yes	yes	yes	yes	yes	135	No	3	Ap.	12	Jan. & June	(b)	Req.
Colorado General Hospital [1]	Denver	50	50	24	36	100	260	No	10	Ap.	12	July & Sept	$25	Req.
Denver General Hospital	Denver	88	33	41	17	171	350	(15)	10	Ap.	18	Jan. & July	$30	None
Fitzsimons General Hospital	Denver	147	273	..	..	1,428	1,848	(16)	9	Ap.	12	Varies	(b)	Req.
Mercy Hospital	Denver	96	61	18	..	..	175	No	3	Ap.	12	July	$25	None
St. Anthony's Hospital	Denver	100	70	22	8	..	200	No	2	Ap.	12	July	$25	None
St. Joseph's Hospital	Denver	82	45	30	44	24	225	No	2	Ap.	12	July	$25	.....
St. Luke's Hospital	Denver	60	40	26	30	55	211	No	8	Ap.	12	June	$15	None
CONNECTICUT														
Bridgeport Hospital	Bridgeport	51	51	99	29	59	289	No	6	Ap.	12	July	No	None
St. Vincent's Hospital	Bridgeport	134	30	40	32	..	236	No	3	Ap.	12	July	$25	.....
Hartford Hospital	Hartford	yes	yes	yes	yes	yes	618	No	11	Ap.	22	**	No	None
Municipal Hospital	Hartford	30	30	4	10	36	110	No	1	Ap.	12	July	$50	Op.
St. Francis Hospital	Hartford	200	120	130	30	..	480	(18)	10	Ap.	24	July	No	None
Middlesex Hospital	Middletown	42	40	50	18	..	150	No	2	Ap.	12	July & Sept.	$15 (g)	None
New Britain General Hospital	New Britain	100	51	66	14	..	231	No	4	Ap.	12-15	July & Oct.	$30	None
Grace Hospital	New Haven	62	114	40	28	..	244	No	6	Ap.	12	July & Nov.	$25	None
Hospital of St. Raphael	New Haven	116	33	20	20	21	210	No	4	Ex.	12	July	$25	None
New Haven Hospital [1]	New Haven	124	114	54	86	22	410	No	21	Ap.	12	***	No	Req.
St. Mary's Hospital	Waterbury	88	72	41	16	..	220	No	3	Ap.	12	July	$25	None
Waterbury Hospital	Waterbury	45	31	30	20	59	185	No	4	Ap.	12	July	$25	.....
DELAWARE														
Delaware Hospital	Wilmington	40	24	50	35	51	200	No	4	Ap.	12	July	$50	Req.
DISTRICT OF COLUMBIA														
Central Disp. and Emergency Hospital	Washington	yes	yes	yes	yes	yes	165	No	11	Ap.	12	July	$10	Req.
Freedmen's Hospital [1]	Washington	138	55	24	19	28	264	No	24	Ex.	12	July & Oct.	No	Req.
Gallinger Municipal Hospital [1]	Washington	81	45	40	10	186	365	No	4	Ex.	12	July	No	Req.
Garfield Memorial Hospital [1]	Washington	84	70	41	..	133	328	No	8	Ap.	12	July	$10	Req.
Georgetown University Hospital	Washington	81	47	51	16	40	235	No	6	Ex.	12	July	$10	Req.
George Washington University Hospital [1]	Washington	yes	yes	yes	yes	yes	110	No	6	Ap.	12	June	$15	Op.
Providence Hospital	Washington	118	60	32	40	50	300	No	7	Ap.	12	July	$10	Req.
St. Elizabeth's Hospital [1]	Washington	60	170	2	..	50	282	(19)	3	Ex.	15	Jan. & July	$155	Req.
Sibley Memorial Hospital	Washington	yes	yes	yes	yes	yes	214	No	4	Ap.	12	July	(i)	None
U. S. Naval Hospital	Washington	74	220	..	..	129	423	(20)	5	Ap.	12	July	(b)	None
Walter Reed General Hospital	Washington	521	617	21	..	21	1,180	No	15	Ap.	12	Aug.	(b)	None
Washington Sanitarium and Hospital, [1] Takoma Park	Washington	50	115	9	6	..	180	No	2	Ap.	12	Aug.	$100	Op.
FLORIDA														
Duval County Hospital	Jacksonville	yes	yes	yes	yes	yes	149	No	4	Ap.	12	July	$50	Req.
St. Luke's Hospital	Jacksonville	yes	yes	21	15	11	175	No	3	Ap.	12	July	$50	Req.

Numerical and other references will be found on pages 824 and 825.

Name of Hospital	Location	Number of Beds: Surgical	Medical	Obstetric	Pediatric	Other	Total	Affiliated—For What Service	Internships: Number	By Examination or Appointment	Length of Service in Months	Begin	Salary per Month	Dispensary Service
GEORGIA														
Davis Fischer Sanatorium	Atlanta	yes	yes	yes	yes	yes	130	No	3	Ap.	12	June	$100	None
Georgia Baptist Hospital	Atlanta	yes	yes	yes	yes	yes	215	No	5	Ap.	12	July	$35 (j)	Op.
Grady Hospital	Atlanta	50	100	75	50	125	400	No	36	Ap.	18-24	June	$15	Req.
Piedmont Hospital	Atlanta	yes	yes	yes	yes	yes	130	No	5	Ap.	12	July	$50	None
St. Joseph Infirmary	Atlanta	70	33	14	..	..	120	No	3	Ap.	12	June	$10	None
University Hospital	Augusta	yes	yes	24	18	..	261	No	9	Ap.	12	July	No	Req.
Wesley Memorial Hospital	Emory University	yes	yes	yes	yes	yes	150	No	7	Ap.	12	July	$25	Req.
Macon Hospital	Macon	50	35	25	30	..	140	(21)	5	Ap.	12	July	$40 (g)	Req.
ILLINOIS														
Alexian Brothers' Hospital (male patients only)	Chicago	140	80	..	..	55	275	...	6	Ap.	12	July	No	Op.
Augustana Hospital	Chicago	225	100	175	25	25	550	No	14	Ap.	18-24	Jan. & July	No	.....
Columbus Hospital	Chicago	74	26	23	10	32	165	No	5	Ap.	12	June	No	None
Cook County Hospital [1]	Chicago	550	500	150	150	1,150	2,500	No	70	Ex.	18	Jan. & July	No	.....
Englewood Hospital	Chicago	yes	yes	yes	yes	yes	150	No	4	Ap.	12	July & Sept.	No	None
Evangelical Hospital of Chicago	Chicago	60	40	40	10	..	150	No	4	Ap.	12	July	$50	.....
Frances E. Willard Hospital [1]	Chicago	50	34	21	10	10	125	No	5	Ap.	12	July & Oct.	No	Req.
Garfield Park Hospital [1]	Chicago	yes	yes	57	yes	yes	275	No	8	Ap.	12	June	No	Op.
Grant Hospital	Chicago	28	60	90	8	..	186	No	8	Ap.	12	July	No	.....
Hospital of St. Anthony de Padua	Chicago	126	30	84	15	..	255	No	6	Ap.	18	†	No	None
Illinois Central Hospital	Chicago	50	30	20	..	75	175	No	8	Ap.	18	Jan. & July	$25	Req.
John B. Murphy Hospital	Chicago	yes	yes	yes	yes	yes	100	No	4	Ap.	12	July	$25	Req.
Lutheran Deaconess Home and Hospital	Chicago	80	40	50	20	10	200	No	7	Ap.	12	††	No	Req.
Lutheran Memorial Hospital	Chicago	80	40	32	..	..	152	No	6	Ap.	12	Jan. & July	No	None
Mercy Hospital	Chicago	yes	yes	yes	yes	yes	400	No	19	Ap.	18	June & Dec.	No	Req.
Michael Reese Hospital [1]	Chicago	yes	yes	yes	yes	yes	489	(22)	39	Ap.	12-24	Jan. & July	No	Op.
Mount Sinai Hospital [1]	Chicago	27	25	27	10	14	103	No	4	Ex.	12	July	$25	.....
Norwegian-American Hospital	Chicago	80	50	55	15	..	200	No	8	Ap.	12	†††	$50	Req.
Presbyterian Hospital [1]	Chicago	129	98	25	35	124	412	(23)	26	Ap.	16	**	No	Op.
Provident Hospital (col.)	Chicago	yes	yes	5	8	..	65	No	5	Ap.	12	††††	No	Req.
Ravenswood Hospital	Chicago	yes	yes	40	..	..	150	No	5	Ap.	12	#	No	Req.
Research and Educational Hospital of University of Illinois [1]	Chicago	30	37	17	14	52	150	No	8	Ap.	12	July	No	.....
St. Anne's Hospital [1]	Chicago	yes	yes	yes	yes	yes	100	No	4	Ap.	12	Jan. & June	No	None
St. Bernard's Hospital	Chicago	90	30	60	8	12	200	No	8	Ap.	12	July	No	.....
St. Elizabeth Hospital	Chicago	90	50	60	25	..	225	No	6	Ap.	12	July	$25	Req.
St. Joseph's Hospital	Chicago	55	45	25	30	45	200	No	8(pp)	Ap.	12	Apr. & July	No	Req.
St. Luke's Hospital	Chicago	yes	yes	yes	yes	yes	743	No	34	Ex.	24	July	No	Req.
St. Mary of Nazareth Hospital	Chicago	105	100	35	20	..	260	No	8	Ap.	12	July	No	Op.
South Shore Hospital	Chicago	60	25	32	8	..	125	No	4	Ap.	12	July	$15	Op.
Swedish Covenant Hospital	Chicago	50	30	35	35	..	150	No	4	Ap.	12	Jan. & July	$30	.....
U. S. Marine Hospital No. 5	Chicago	48	59	..	..	20	127	(24)	2	Ex.	12	July	(b)	Req.
University Hospital	Chicago	63	20	26	9	1	119	No	4	Ap.	12	July	No	Op.
Washington Boulevard Hospital	Chicago	yes	yes	yes	yes	yes	100	No	6	Ap.	18	Jan. & July	No	Req.
Wesley Memorial Hospital	Chicago	yes	yes	yes	yes	yes	275	No	17	Ap.	24	†††	No	None
West Side Hospital	Chicago	yes	yes	yes	yes	yes	165	No	8	Ap.	18	June & Dec.	No	.....
Women and Children's Hospital [1]	Chicago	30	20	30	20	..	100	No	4	Ap.	12	Jan. & July	No	Req.
Decatur and Macon County Hospital	Decatur	yes	yes	23	33	45	200	No	4	Ap.	12	July	$25	Req.
Evanston Hospital [1]	Evanston	74	28	60	42	46	250	No	9	Ap.	18	Jan. & July	No	Req.
St. Francis Hospital [1]	Evanston	50	50	35	..	65	200	No	6	Ap.	12	##	$25	.....
Oak Park Hospital	Oak Park	50	30	40	15	40	175	No	5	Ap.	12	July	$10	.....
West Suburban Hospital	Oak Park	yes	yes	yes	yes	yes	292	No	12	Ap.	12	##	No	None
St. Francis Hospital	Peoria	129	75	36	23	10	273	No	4	Ap.	12	July	$25	Req.
INDIANA														
Ft. Wayne Lutheran Hospital	Fort Wayne	yes	yes	yes	yes	yes	134	No	2	Ap.	12	July	$25	Req.
St. Joseph's Hospital	Fort Wayne	100	70	33	20	..	223	No	5	Ap.	12	July	$25 (k)	Req.
St. Mary's Mercy Hospital [1]	Gary	yes	yes	yes	yes	yes	150	No	4	Ap.	12	July	$25 (a)	None
St. Margaret's Hospital	Hammond	125	50	35	20	20	250	No	8	Ap.	12	###	$40	None
Indianapolis City Hospital	Indianapolis	175	175	30	50	170	600	No	20	Ex.	12	July	$12.50	Req.
Methodist Episcopal Hospital	Indianapolis	yes	yes	yes	yes	yes	384	No	15	Ap.	12	June	$25	None
Robert W. Long Hospital	Indianapolis	yes	yes	yes	yes	yes	116	(25)	6	Ap.	12	¶	$12.50	Req.
St. Vincent's Hospital	Indianapolis	yes	yes	yes	yes	yes	250	No	6	Ap.	12	July	$25	None
St. Elizabeth Hospital	Lafayette	95	90	20	12	33	250	No	4	Ap	12	July	$50	None
Epworth Hospital and Training School	South Bend	37	25	25	25	38	150	No	3	Ap.	12	July	$30	Req.
St. Joseph Hospital	South Bend	yes	yes	22	20	..	125	No	1	Ap.	12	July	$50	Req.
St. Anthony's Hospital [1]	Terre Haute	yes	yes	yes	yes	yes	160	No	2	Ap.	12	July	$50	None
IOWA														
Mercy Hospital	Cedar Rapids	76	40	33	12	39	200	No	2	Ap.	12	June	...	None
St. Luke's Methodist Hospital [1]	Cedar Rapids	98	35	20	10	12	175	No	2	Ap.	12	July	$50	Req.
Jennie Edmundson Memorial Hospital	Council Bluffs	yes	yes	yes	yes	yes	110	No	2	Ap.	12	July	$25	Op.
Mercy Hospital	Davenport	50	45	32	5	9	141	No	2	Ap.	12	July	(l)	Req.
Iowa Lutheran Hospital	Des Moines	77	27	34	12	50	200	No	5	Ap.	12	July	$25	None
Iowa Methodist Hospital [1]	Des Moines	yes	yes	yes	yes	yes	282	(26)	8	Ap.	12	July	$25	None
Mercy Hospital	Des Moines	yes	yes	yes	yes	yes	165	No	3	Ap.	12	July	$60	.....
State University Hospital [1]	Iowa City	137	131	103	87	345	803	No	34	Ap.	12	July	No	Req.
St. Joseph's Mercy Hospital [1]	Sioux City	140	35	30	12	8	225	No	3	Ap.	12	July	$25	Req.
KANSAS														
Bell Memorial Hospital	Kansas City	35	40	10	12	23	120	No	5	Ap.	12	July	$25	Req.
St. Margaret's Hospital	Kansas City	146	163	..	20	68	400	No	7	Ap.	12	July	$25	Req.
St. Francis Hospital [1]	Wichita	75	75	30	25	45	250	No	4	Ap.	12	July	$25	Req.
Wesley Hospital	Wichita	98	37	50	28	2	215	No	4	Ap.	12	July	$50	None
Wichita Hospital	Wichita	yes	yes	yes	yes	yes	115	No	2	Ap.	12	July	$50	None
KENTUCKY														
St. Elizabeth Hospital	Covington	76	180	32	..	12	300	No	5	Ap.	12	July	$50	None
Good Samaritan Hospital	Lexington	30	16	14	20	63	143	No	2	Ap.	12	July	$25	Req.
St. Joseph's Hospital	Lexington	yes	yes	yes	yes	yes	175	No	2	Ap.	12	July	$35 (g)	None
Louisville City Hospital [1]	Louisville	120	120	60	60	60	420	No	(m)	Ap.	12	July	(n)	Req.
St. Anthony's Hospital	Louisville	110	25	17	10	13	175	No	2	Ap.	12	July	$50	None
Sts. Mary and Elizabeth Hospital	Louisville	80	12	14	12	18	145	No	2	Ap.	12	July	$35 (a)	None
LOUISIANA														
Charity Hospital [1]	New Orleans	395	304	57	55	745	1,556	No	50	Ap.	12	July	No	Req.
Hotel Dieu [1]	New Orleans	yes	yes	yes	yes	yes	285	No	8	Ap.	12	July	$50	None
Touro Infirmary	New Orleans	yes	yes	yes	yes	yes	400	No	23	Ap.	12	July	$20	Req.
U. S. Marine Hospital No. 14	New Orleans	131	145	..	..	194	470	(27)	20	Ap.	12	July	(b)	None
T. E. Schumpert Memorial Hospital	Shreveport	78	44	10	4	64	200	(28)	2	Ap.	12	July	$100	None
Shreveport Charity Hospital	Shreveport	112	90	20	20	8	250	No	10	Ap.	12	July	$10	Op.
MAINE														
Eastern Maine General Hospital	Bangor	yes	yes	yes	yes	yes	130	No	3	Ap.	12	July	(p)	None
Central Maine General Hospital	Lewiston	yes	yes	yes	yes	yes	120	No	2	Ap.	12	July	$50	Req.
Maine General Hospital [1]	Portland	yes	yes	yes	yes	yes	208	No	6	Ap.	12	July	No	Op.

Numerical and other references will be found on pages 824 and 825.

Name of Hospital	Location	Number of Beds: Surgical	Medical	Obstetric	Pediatric	Other	Total	Affiliated—For What Service	Internships: Number	By Examination or Appointment	Length of Service in Months	Begin	Salary per Month	Dispensary Service
MARYLAND														
Baltimore City Hospitals	Baltimore	95	65	..	..	300	460	(29)	12	Ap.	12	July	$25	Req.
Church Home and Infirmary	Baltimore	yes	yes	yes	yes	yes	195	No	6	Ap.	12	July	No	Op.
Franklin Square Hospital	Baltimore	40	40	35	10	..	125	No	4	Ap.	12	July	$20	Req.
Johns Hopkins Hospital [1]	Baltimore	yes	yes	yes	yes	yes	723	No	43	Ap.	12	Sept.	No	Req.
Maryland General Hospital	Baltimore	yes	yes	24	20	..	230	No	9	Ap.	12	July	$10 (q)	.....
Mercy Hospital	Baltimore	yes	yes	yes	yes	yes	279	No	17	Ap.	12	July	No	None
St. Agnes Hospital	Baltimore	143	24	29	18	..	205	No	8	Ap.	12	July	No	Req.
St. Joseph Hospital	Baltimore	yes	yes	yes	yes	yes	274	No	10	Ap.	12	July	No	Req.
Sinai Hospital of Baltimore, Inc. [1]	Baltimore	76	76	35	15	6	208	No	20	Ap.	12	July	No	Req.
Union Memorial Hospital	Baltimore	yes	yes	yes	yes	yes	149	No	8	Ap.	12	July	No	Req.
University Hospital [1]	Baltimore	80	70	28	31	41	250	No	15	Ap.	12	July	No	Op.
West Baltimore General Hospital [1]	Baltimore	50	50	20	15	30	165	No	3	Ap.	12	July	$25	Op.
MASSACHUSETTS														
Boston City Hospital	Boston	yes	yes	yes	yes	yes	834	No	66	Ex.	¶¶¶	††	No	Req.
Carney Hospital	Boston	110	70	22	20	18	240	No	16	Ap.	16	†††	No	Req.
Long Island Hospital, [1] L. I.	Boston	110	165	25	100	50	450	No	6	Ap.	12	July	$50	Req.
Massachusetts General Hospital	Boston	208	130	..	40	47	425	(30)	36	Ex.	12-21	(1-a)	No	Req.
Massachusetts Homeopathic Hospital [1]	Boston	158	65	91	46	150	511	No	(r)	Ap.	12	July	No	Req.
New England Hospital for Women and Children, [2] Roxbury	Boston	30	15	75	30	..	150	No	6	Ap.	12	July	No	Req.
Peter Bent Brigham Hospital	Boston	yes	yes	..	..	..	223	No	19	Ex.	16	(1-b)	No	Req.
St. Elizabeth's Hospital	Boston	50	43	39	30	119	280	No	8	Ex.	18	(1-c)	No	Req.
Brockton Hospital	Brockton	yes	yes	50	yes	..	131	No	3	Ex.	12	Apr. & Aug.	$10	Req.
Cambridge Hospital	Cambridge	yes	yes	yes	yes	yes	160	No	3	Ap.	12	Feb. & June	No	Req.
U. S. Naval Hospital	Chelsea	174	347	..	..	..	521	(31)	10	Ex.	12	Varies	(b)	None
Fall River General Hospital	Fall River	32	49	42	22	9	154	No	3	Ap.	12	¶	$41	Req.
Union Hospital	Fall River	yes	yes	30	30	3	150	No	2	Ex.	12	July	(e)	Req.
Burbank Hospital	Fitchburg	yes	yes	yes	yes	yes	125	No	2	Ap.	12	July	$25	Op.
Lawrence General Hospital	Lawrence	34	14	40	20	43	151	No	2	Ap.	12	June	$10	Req.
Lowell Corporation Hospital	Lowell	yes	yes	12	11	..	100	No	1	Ap.	12	June	$25	Req.
Lowell General Hospital [1]	Lowell	yes	yes	30	14	..	130	No	1	Ex.	12	July	$25	None
St. John's Hospital	Lowell	yes	yes	yes	yes	yes	142	No	3	Ap.	12	June	No	Op.
Lynn Hospital	Lynn	46	34	92	31	..	203	No	3	Ex.	12	¶	(t)	None
St. Luke's Hospital	New Bedford	52	20	90	65	96	323	No	4	Ap.	12	July	No	Req.
Newton Hospital	Newton	43	29	30	11	66	179	No	2	Ex.	12	July	No	Req.
House of Mercy Hospital	Pittsfield	25	25	32	25	82	189	No	2	Ap.	12	Jan. & June	$50	Req.
Salem Hospital [1]	Salem	yes	yes	yes	yes	yes	132	No	2	Ap.	12	June & July	$25	Req.
Mercy Hospital	Springfield	75	50	50	25	..	200	No	2	Ap.	12	June	$25	None
Springfield Hospital	Springfield	yes	yes	yes	yes	yes	190	No	3	Ap.	12	July	No	Req.
Waltham Hospital	Waltham	yes	yes	yes	yes	50	126	No	3	Ap.	12	April	No	Req.
Memorial Hospital [2]	Worcester	63	20	60	24	37	204	No	8	Ap.	12	July & Sept.	No	Req.
St. Vincent's Hospital	Worcester	140	40	25	25	20	250	No	3	Ap.	12	Feb. & July	$50	None
Worcester City Hospital	Worcester	180	129	28	35	28	400	No	14	Ap.	21	(1-d)	No	None
MICHIGAN														
University of Michigan Hospital [1]	Ann Arbor	208	94	84	175	539	1,100	No	31	Ap.	12	July	No	Req.
Battle Creek Sanitarium [1]	Battle Creek	75	885	15	25	..	1,000	No	4	Ap.	12	July	$50	Req.
City of Detroit Receiving Hospital	Detroit	109	154	..	10	92	365	(32)	26	Ap.	12	Jan. & July	$25	Req.
Grace Hospital [1]	Detroit	100	80	36	64	82	362	(33)	21	Ap.	12	(1-e)	$25	Req.
Harper Hospital	Detroit	300	80	60	20	..	460	(34)	41	Ap.	12	July	(u)	Req.
Henry Ford Hospital	Detroit	yes	yes	yes	yes	yes	500	No	26	Both	12	Sept.	$125	None
Providence Hospital [1]	Detroit	200	75	100	100	..	475	(35)	15	Ap.	12	July	$25	None
St. Mary's Hospital	Detroit	150	100	30	20	..	300	(34)	14	Ap.	12	July	$25	Req.
Hurley Hospital [1]	Flint	77	53	67	30	12	239	No	5	Ap.	12	July	$25	Op.
Blodgett Memorial Hospital [1]	Grand Rapids	yes	yes	yes	yes	yes	152	No	5	Ap.	12	July	No	Req.
Butterworth Hospital	Grand Rapids	75	52	104	30	9	270	No	9	Ap.	12	July	$10	Req.
St. Mary's Hospital	Grand Rapids	45	20	20	30	10	125	No	6	Ap.	12	July	$25	Req.
Highland Park General Hospital	Highland Park	yes	yes	30	16	26	120	No	6	Ap.	12	July	$25	Req.
W. A. Foote Memorial Hospital [1]	Jackson	yes	yes	yes	yes	yes	145	No	2	Ap.	12	July	$50	Op.
Hackley Hospital [1]	Muskegon	29	29	16	15	26	115	No	1	Ap.	12	July	$50	None
Mercy Hospital [1]	Muskegon	35	25	10	10	20	100	No	2	Ap.	12	July	$50	Req.
Saginaw General Hospital	Saginaw	53	42	25	..	..	120	No	4	Ap.	12	Jan. & June	$25	None
MINNESOTA														
St. Luke's Hospital	Duluth	yes	yes	58	27	yes	270	No	6	Ap.	12	Apr. & July	$25	Op.
St. Mary's Hospital [1]	Duluth	120	89	30	35	..	280	No	6	Ap.	12	Jan. & Apr.	$25	Req.
Abbott Hospital	Minneapolis	25	20	15	40	..	100	No	2	Ap.	12	July	$25	Op.
Asbury Hospital	Minneapolis	65	48	25	25	..	163	No	3	Ap.	12	July	$25	.....
Fairview Hospital	Minneapolis	95	30	27	10	65	227	No	4	Ap.	12	June	$25	Req.
Minneapolis General Hospital [1]	Minneapolis	136	123	40	70	320	689	No	24	Ex.	12	Jan. & July	No	Req.
Northwestern Hospital	Minneapolis	44	42	19	6	19	130	No	4	Ap.	12	June & Dec.	$25	None
St. Barnabas Hospital [1]	Minneapolis	78	30	42	15	10	175	No	2	Ap.	12	July	$25	None
St. Mary's Hospital	Minneapolis	102	54	35	26	30	247	No	7	Ap.	12	July	$25	None
Swedish Hospital [1]	Minneapolis	85	50	45	30	25	235	No	8	Ap.	12	Jan. & June	$50	None
University Hospital [1]	Minneapolis	109	65	16	45	45	280	(10)	12	Ex.	12	Jan. & July	No	Req.
Ancker Hospital	St. Paul	200	200	55	50	345	850	No	24	Ap.	12	July	No	Req.
Bethesda Hospital	St. Paul	yes	yes	yes	yes	yes	110	No	1	Ap.	12	Jan. & July	$25	None
Charles T. Miller Hospital, Inc. [1]	St. Paul	yes	yes	yes	yes	yes	216	(36)	8	Ap.	12	Jan. & July	No	Req.
Mounds Park Sanitarium	St. Paul	34	50	10	5	26	125	No	1	Ap.	12	July	$25	Req.
Northern Pacific Beneficial Association Hospital	St. Paul	yes	yes	yes	yes	yes	154	No	2	Ap.	12	July	$25	Req.
St. Joseph's Hospital	St. Paul	128	38	24	12	48	250	(37)	5	Ap.	12	July	$25	None
St. Luke's Hospital	St. Paul	63	48	23	26	25	185	No	4	Ap.	12	July	$25	Op.
MISSISSIPPI														
Mississippi State Charity Hospital	Jackson	40	25	6	18	11	100	No	4	Ap.	12	July	No	Op.
Natchez Charity Hospital	Natchez	30	60	15	10	10	125	No	4	Ap.	12	May	$25	Req.
Mississippi State Charity Hospital	Vicksburg	50	50	5	5	..	110	No	4	Ap.	12	May	No	None
MISSOURI														
Kansas City General Hospital (white and colored)	Kansas City	100	100	50	50	50	350	No	18	Ap.	12	July	$25	Req.
Research Hospital [1]	Kansas City	yes	yes	yes	yes	yes	200	No	2	Ap.	12	July	$50	None
St. Joseph Hospital	Kansas City	130	56	14	25	..	225	No	4	Ap.	12	July	$50	None
St. Luke's Hospital	Kansas City	45	40	27	20	33	165	No	5	Ap.	12	July	$50	Req.
St. Mary's Hospital	Kansas City	yes	yes	yes	yes	yes	175	No	5	Ap.	12	July	$50	Req.
Missouri Methodist Hospital [1]	St. Joseph	100	40	20	20	45	225	No	4	Ap.	12	July	$25	Req.
Alexian Brothers Hospital	St. Louis	55	71	..	..	124	250	(38)	4	Ap.	12	July	$15 (v)	Req.
Barnes Hospital [1]	St. Louis	129	106	47	40	..	322	(39)	20	Ap.	12-18	Jan. & July	No	Req.
Christian Hospital	St. Louis	50	35	30	10	15	140	No	2	Ap.	12	July	$50	None
Jewish Hospital [1]	St. Louis	81	81	29	24	86	301	(40)	12	Ap.	12	July	$30	None
Missouri Baptist Sanitarium	St. Louis	150	118	36	25	31	360	No	9	Ap.	12	July	$25	None
St. John's Hospital	St. Louis	160	80	30	30	..	300	No	10	Ap.	12-24	July	(x)	None

Numerical and other references will be found on pages 824 and 825.

Name of Hospital	Location	Number of Beds						Affiliated—For What Service	Internships					Dispensary Service
		Surgical	Medical	Obstetric	Pediatric	Other	Total		Number	By Examination or Appointment	Length of Service in Months	Begin	Salary per Month	
MISSOURI—Continued														
St. Louis City Hospital No. 1 (white)	St. Louis	150	150	50	50	300	700	(41)	50	Ap.	12	July	$10 (y)	None
St. Louis City Hospital No. 2 (col.)	St. Louis	82	75	20	46	52	275	No	14	Ap.	12	July	$25	None
St. Luke's Hospital	St. Louis	yes	yes	yes	yes	yes	200	No	7	Ap.	12	July	$25	Req.
St. Mary's Hospital	St. Louis	100	50	50	10	40	250	(42)	15	Ap.	12	July	No	None
St. Mary's Infirmary	St. Louis	yes	yes	..	10	..	126	(43)	(aa)	Ap.	12	July	(bb)	Req.
MONTANA														
Murray Hospital	Butte	yes	yes	yes	yes	yes	117	No	3	Ap.	12	July	$50	Req.
St. James Hospital	Butte	71	45	12	13	24	165	No	2	Ap.	12	July	$60	Req.
NEBRASKA														
Lincoln General Hospital [1]	Lincoln	41	42	50	24	..	157	No	2	Ap.	12	July	$50	Op.
St. Elizabeth's Hospital	Lincoln	yes	yes	yes	yes	yes	150	No	4	Ap.	12	July	$25	None
Bishop Clarkson Memorial Hospital	Omaha	yes	yes	12	20	..	100	No	3	Ap.	12	July	$25	None
Nebraska Methodist Episcopal Hospital	Omaha	90	50	50	35	..	225	No	6	Ap.	12	July	No	.....
St. Joseph's Creighton Memorial Hospital [1]	Omaha	130	115	18	15	142	420	No	10	Ap.	12	July	$25	Req.
University Hospital	Omaha	40	40	20	20	..	120	No	9	Ap.	18	**	No	Req.
NEW JERSEY														
Atlantic City Hospital [1]	Atlantic City	90	64	38	18	22	232	(44)	10	Ap.	12	July	$25	Req.
Bayonne Hospital and Dispensary	Bayonne	27	26	11	17	37	118	No	3	Ap.	12	(1-f)	$25	Req.
Cooper Hospital	Camden	82	20	18	40	60	220	No	7	Ap.	12	July	$10	Req.
West Jersey Homeopathic Hospital	Camden	50	18	47	35	50	200	No	6	Ap.	12	June	$50	Req.
Alexian Brothers' Hospital	Elizabeth	60	60	..	..	..	120	(45)	1	Ap.	21	June	$50	Req.
Elizabeth General Hospital and Dispensary	Elizabeth	60	54	30	12	20	176	No	5	Ex.	12	July	$25	.....
St. Elizabeth Hospital	Elizabeth	yes	yes	yes	yes	yes	180	No	4	Ap.	12	July	$25	Req.
Englewood Hospital	Englewood	yes	yes	yes	yes	yes	200	No	6	Ap.	12	Jan. & July	$25	Req.
Hackensack Hospital	Hackensack	86	65	30	30	14	225	No	4	Ap.	12	July	$25	Req.
St. Mary's Hospital	Hoboken	120	110	5	40	100	375	(46)	7	Ap.	12	July & Sept.	$25	.....
Christ Hospital	Jersey City	56	14	26	24	..	120	No	5	Ap.	15	†††	(cc)	Op.
Jersey City Hospital [1]	Jersey City	125	175	62	83	155	600	No	26	Ex.	24	Jan. & July	No	Req.
St. Francis Hospital	Jersey City	102	86	..	32	..	220	No	6	Ap.	12	July & Nov.	$25	Req.
Monmouth Memorial Hospital	Long Branch	yes	yes	yes	yes	yes	200	No	5	Ap.	18	Jan. & July	$50	Req.
Mountainside Hospital	Montclair	yes	yes	yes	yes	yes	250	No	5	Ap.	12	July	$25	Req.
Morristown Memorial Hospital	Morristown	18	18	39	16	77	168	No	3	Ap.	12	¶	$50	Req.
Hospital of St. Barnabas	Newark	yes	yes	17	12	18	135	No	2	Ap.	12	July	$50	Op.
Newark Beth Israel Hospital	Newark	20	20	6	14	60	120	No	7	Ex.	12-15	June & Oct.	No	Req.
Newark City Hospital [1]	Newark	210	160	80	115	135	700	No	21	Ex.	21	(1-g)	No	Req.
Newark Memorial Hospital [1]	Newark	yes	yes	30	50	..	150	No	4	Ap.	12	July & Sept.	$25	Req.
St. James' General Hospital [1]	Newark	82	11	12	20	..	125	No	3	Ap.	12	July	$50	Req.
St. Michael's Hospital	Newark	150	150	..	..	50	350	(47)	7	Ex.	12	July	No	Req.
Orange Memorial Hospital	Orange	yes	yes	yes	yes	yes	250	No	5	Ap.	12	July	$25	Req.
St. Mary's Hospital [1]	Orange	50	50	50	..	..	150	No	2	Ap.	12	Sept.	$25	Req.
Passaic General Hospital [1]	Passaic	75	30	24	18	53	200	No	3	Ap.	12	July	$50	Op.
St. Mary's Hospital	Passaic	34	34	22	27	5	122	No	2	Ap.	12	July	$50	None
Barnert Memorial Hospital [1]	Paterson	35	17	10	10	28	100	No	3	Ap.	12	(1-h)	(e)	Req.
Paterson General Hospital	Paterson	48	28	8	39	44	167	No	4	Ap.	12	July	$50	None
St. Joseph Hospital [1]	Paterson	yes	yes	yes	yes	yes	260	No	5	Ap.	12	July	$25	Req.
Muhlenberg Hospital	Plainfield	48	24	16	24	23	135	No	5	Ap.	12	July	$25	Req.
Holy Name Hospital	Teaneck	65	35	58	16	..	174	No	3	Ap.	12	July	$50	Req.
Mercer Hospital [1]	Trenton	54	40	17	16	48	175	No	4	Ap.	12	July	$33.33	Req.
St. Francis Hospital	Trenton	153	30	26	16	..	225	No	6	Ap.	12	July	$35	Req.
William McKinley Memorial Hospital	Trenton	yes	yes	yes	yes	yes	139	No	3	Ap.	12	July	$50	Req.
North Hudson Hospital	Union City	41	20	11	8	20	100	No	4	Ap.	12	Jan. & July	$25	Op.
NEW YORK														
Albany Hospital [1]	Albany	yes	yes	18	15	192	420	No	15	Ap.	12	July & Oct.	No	Req.
St. Peter's Hospital [1]	Albany	54	41	2	8	30	135	(17)	4	Ex.	12	July	$50	Req.
Auburn City Hospital	Auburn	yes	yes	42	21	87	150	No	3	Ap.	12	July	$25	.....
Binghamton City Hospital	Binghamton	21	24	40	14	75	177	No	4	Ap.	12	July	$50	.....
Beth Moses Hospital	Brooklyn	92	42	60	18	..	212	No	10	Ex.	20	**	No	Op.
Brooklyn Hospital	Brooklyn	94	52	44	..	104	294	No	14	Ex.	24	July	No	Op.
Brownsville and East New York Hospital	Brooklyn	50	35	50	10	..	145	No	11	Ex.	12-24	June	No	Req.
Cumberland Hospital	Brooklyn	94	76	113	67	150	500	No	24	Ap.	24	July	No	Req.
Greenpoint Hospital [1]	Brooklyn	90	60	80	30	4	264	No	12	Ap.	24	July	No	Req.
Hospital of the Holy Family	Brooklyn	52	24	29	5	..	110	No	6	Ap.	16	May & June	No	Req.
Jewish Hospital [1]	Brooklyn	yes	yes	yes	yes	yes	330	No	23	Ap.	24	Jan. & July	No	None
Kings County Hospital	Brooklyn	yes	yes	yes	yes	yes	1,809	No	26	Ap.	26	**	No	Req.
Long Island College Hospital	Brooklyn	78	63	30	40	259	470	No	32	Ap.	12	July	(dd)	None
Methodist Episcopal Hospital	Brooklyn	150	50	88	75	12	375	No	11	Ap.	24	July	No	Op.
Norwegian Lutheran Deaconess Home and Hospital	Brooklyn	50	27	29	42	52	200	No	8	Ap.	24	June & Sept.	No	Req.
St. Catherine's Hospital	Brooklyn	119	94	83	..	..	296	No	12	Ex.	24	July	No	Op.
St. John's Hospital	Brooklyn	yes	yes	22	10	16	100	No	5	Ap.	15	(1-g)	$25	None
St. Mary's Hospital [1]	Brooklyn	138	62	80	30	..	310	No	10	Ap.	24	July	No	Req.
St. Peter's Hospital	Brooklyn	160	90	..	..	..	250	No	5	Ap.	12	July	No	None
U. S. Naval Hospital	Brooklyn	143	411	..	..	305	859	(48)	10	Ap.	12	July	(b)	None
Wyckoff Heights Hospital	Brooklyn	90	35	30	20	..	175	No	8	Ap.	24	Jan. & July	No	Req.
Buffalo City Hospital [1]	Buffalo	94	142	24	62	541	863	No	24	Ap.	12	July	$40	Req.
Buffalo General Hospital	Buffalo	167	179	28	26	..	400	No	12	Ap.	12	July	No	Req.
Buffalo Hospital of the Sisters of Charity	Buffalo	124	73	..	18	..	215	(49)	9	Ex.	12	July	$25	None
Deaconess Hospital	Buffalo	yes	yes	80	20	..	212	No	4	Ap.	12	July	$10 (ee)	None
Emergency Hospital of Sisters of Charity	Buffalo	70	30	..	..	..	100	(50)	5	Both	12	July	$25	Req.
Millard Fillmore Hospital	Buffalo	yes	yes	66	..	..	160	No	3	Ap.	12	July	$50	None
Clifton Springs Sanitarium and Clinic [1]	Clifton Springs	38	329	8	..	..	375	No	3	Ap.	12	July	$25	Req.
Arnot-Ogden Memorial Hospital	Elmira	25	20	20	15	30	110	No	1	Ap.	12	July	$25	None
Flushing Hospital and Dispensary [1]	Flushing	50	21	31	49	..	151	No	5	Ap.	12	(1-f)	$50	Req.
St. John's Long Island City Hospital	Long Island City	103	44	65	33	..	245	No	8	Ap.	24	(1-e)	No	Op.
Erie County Home and Infirmary	Millgrove	yes	yes	yes	..	..	300	No	2	Ap.	12	July	$150	None
Nassau Hospital	Mineola	51	20	59	34	43	207	No	4	Ap.	12	July	$50	None
Mount Vernon Hospital	Mount Vernon	48	22	68	12	..	150	No	3	Ex.	18	Jan. & July	(ff)	Req.
New Rochelle Hospital [1]	New Rochelle	yes	yes	yes	yes	yes	150	No	3	Ex.	12	(1-j)	No	Op.
Bellevue Hospital [1]	New York	414	307	78	136	754	1,689	No	81	Both	12-24	Jan. & July	No	None
Beth Israel Hospital	New York	56	54	12	21	..	143	No	14	Ex.	24-36	Jan. & July	No	None
Fifth Avenue Hospital	New York	92	50	76	75	..	293	No	11	Ap.	12	Jan. & July	No.	Req.
Fordham Hospital	New York	109	89	53	57	..	308	No	11	Ex.	16	(1-b)	No	None
French Hospital	New York	yes	yes	yes	yes	yes	106	No	6	Ap.	12-24	Jan. & July	No	Req.
Gouverneur Hospital [1]	New York	75	47	41	22	25	210	No	13	Ex.	12-24	Jan. & July	No	None
Harlem Hospital [1]	New York	93	95	80	80	..	348	No	20	Ex.	24	Jan. & July	No	Req.
Italian Benevolent Institute and Hospital	New York	65	18	8	9	..	100	No	5	Both	12	(1-g)	(w)	None
Knickerbocker Hospital	New York	31	14	24	5	38	112	No	6	Ap.	18	(1-g)	No	Req.
Lebanon Hospital	New York	51	62	18	20	41	192	No	11	Ex.	20	(1-k)	No	None
Lenox Hill Hospital	New York	80	50	20	70	125	345	No	16	Ex.	24	Feb. & Aug.	No	None

Numerical and other references will be found on pages 824 and 825.

Name of Hospital	Location	Number of Beds: Surgical	Medical	Obstetric	Pediatric	Other	Total	Affiliated—For What Service	Internships: Number	By Examination or Appointment	Length of Service in Months	Begin	Salary per Month	Dispensary Service
NEW YORK—Continued														
Lincoln Hospital	New York	111	86	36	yes	28	261	No	20	Ex.	24	Jan. & July	No	None
Metropolitan Hospital [1]	New York	210	230	68	336	756	1,600	No	32	Ex.	18	Jan. & July	$40	Req.
Mount Sinai Hospital [1]	New York	164	131	37	46	290	668	No	22	Ex.	30	Jan. & July	No	None
New York City Hospital	New York	180	558	76	96	150	1,060	No	32	Ex.	24	Jan. & July	No	Op.
New York Homeopathic Medical College and Flower Hospital	New York	94	42	71	20	..	227	No	9	Ap.	12	July	$25	Req.
New York Hospital [1]	New York	108	79	..	38	18	243	No	18	Both	24	Jan. & July	No	Op.
New York Infirmary for Women and Children [2]	New York	32	18	60	18	..	128	No	5	Ap.	12	July & Sept.	$10	Req.
New York Polyclinic Medical School and Hospital	New York	160	100	20	20	50	350	(51)	19	Both	24	July	No	Req.
New York Post Graduate Medical School and Hospital	New York	167	66	28	58	103	422	No	37	Ex.	12-30	†††	No	Op.
Presbyterian Hospital [1]	New York	98	90	..	28	39	255	No	23	Ap.	20	(1-l)	No	Req.
Roosevelt Hospital	New York	141	82	39	24	91	377	No	19	Ex.	24	Jan. & July	No	None
St. Francis Hospital	New York	235	135	..	30	50	450	No	8	Ap.	24	Jan. & July	No	None
St. Luke's Hospital	New York	233	152	..	32	..	417	No	16	Ex.	24	Jan. & July	No	Op.
St. Mark's Hospital	New York	71	17	40	5	..	133	No	8	Both	24	July	$10	Req.
St. Vincent's Hospital	New York	220	130	..	..	..	350	(52)	20	Ap.	18-24	Jan. & July	No	None
U. S. Marine Hosp. No. 43 (Ellis Island)	New York	78	196	30	12	136	452	No	7	Ex.	12	July	(b)	None
United Hospital	Port Chester	yes	yes	36	12	..	110	No	2	Both	12	Jan. & July	$50	Req.
Vassar Brothers' Hospital	Poughkeepsie	yes	yes	yes	yes	yes	291	No	4	Ap.	24	July	(gg)	Op.
Genesee Hospital [1]	Rochester	60	50	16	32	42	200	No	5	Ap.	12	July	$25	Op.
Highland Hospital	Rochester	yes	yes	56	10	..	253	No	4	Ap.	12	July	$25	Req.
Rochester General Hospital	Rochester	101	39	88	11	72	311	No	6	Ap.	12	July	$25	Req.
St. Mary's Hospital	Rochester	75	64	21	15	25	200	No	4	Ap.	12	July	$25	Req.
Strong Memorial Hospital [1]	Rochester	62	66	30	48	40	246	(53)	12	Ap.	12	July	No	Req.
Ellis Hospital [1]	Schenectady	130	30	30	28	57	275	No	5	Ap.	12	July	$50	None
Staten Island Hospital (Tompkinsville)	Staten Island	92	71	53	44	18	278	No	5	Ap.	15	†††	$30	Both
Hospital of the Good Shepherd, Syracuse University	Syracuse	yes	yes	39	39	..	257	No	6	Ap.	12	July	No	None
Syracuse Memorial Hospital [1]	Syracuse	yes	yes	40	39	..	151	No	4	Ap.	12	July	No	Req.
Samaritan Hospital	Troy	64	32	25	16	43	180	No	3	Ap.	12	(1-h)	$50	None
Grasslands Hospital [1]	Valhalla	73	124	15	30	154	396	No	10	Ap.	12	July	$50	Req.
St. John's Riverside Hospital	Yonkers	32	20	..	26	23	101	No	4	Ap.	12	(1-m)	$25	Req.
St. Joseph's Hospital	Yonkers	40	25	39	..	..	104	No	3	Ap.	12	July	$50	None
NORTH CAROLINA														
Watts Hospital [1]	Durham	57	35	20	12	11	135	No	3	Ap.	12	July	(hh)	Req.
Rex Hospital [1]	Raleigh	yes	yes	32	18	15	125	No	2	Ap.	12	June	$75	Both
James Walker Memorial Hospital	Wilmington	yes	yes	16	25	5	150	No	4	Ap.	12	July	$25	Req.
NORTH DAKOTA														
Bismarck Hospital and Deaconess Home	Bismarck	66	4	14	10	46	140	No	2	Ap.	12	July	$50	None
St. John's Hospital	Fargo	100	42	43	15	..	200	No	3	Ap.	12	July	$50	Op.
OHIO														
City Hospital	Akron	yes	yes	yes	yes	yes	210	(54)	6	Ap.	12	July	$25 (g)	Req.
Bethesda Hospital	Cincinnati	157	68	54	20	..	299	No	8	Ap.	12	July	$25	Req.
Christ Hospital [1]	Cincinnati	70	28	40	..	27	165	(55)	5	Ap.	12	July	$25	Op.
Cincinnati General Hospital [1]	Cincinnati	168	124	37	100	311	740	(56)	24	Ap.	12	July	No	Op.
Good Samaritan Hospital [1]	Cincinnati	225	100	75	100	..	500	(57)	10	Ap.	12	July	$25	None
Jewish Hospital	Cincinnati	yes	yes	53	50	..	293	No	6	Ap.	12	July	$25	None
St. Mary Hospital	Cincinnati	yes	yes	yes	yes	yes	165	No	4	Ap.	12	July	$25	Req.
Cleveland City Hospital [1]	Cleveland	230	200	50	64	555	1,069	No	24	Ap.	12	July	No	Req.
Lakeside Hospital [1]	Cleveland	87	72	24	..	69	252	(58)	16	Ap.	12	July	No	Req.
Mount Sinai Hospital [1]	Cleveland	yes	yes	46	yes	yes	268	(59)	10	Ap.	12	July	$10	Req.
St. Alexis Hospital	Cleveland	135	74	..	26	..	235	(60)	8	Ap.	12	July	$25	None
St. John's Hospital	Cleveland	60	32	57	23	48	220	No	6	Ap.	12	July	$25	Req.
St. Luke's Hospital [1]	Cleveland	57	40	35	20	28	180	No	7	Ap.	12	July	$25	Req.
St. Vincent's Charity Hospital	Cleveland	190	70	..	20	..	280	No	12	Ap.	12	July	No	Req.
Grant Hospital	Columbus	179	32	31	32	26	300	No	8	Ap.	12	June	$25 (a)	Req.
Hawkes Hospital of Mt. Carmel	Columbus	yes	yes	yes	yes	yes	225	No	6	Ap.	12	July	$25 (g)	None
St. Francis Hospital	Columbus	80	80	..	..	..	160	(61)	4	Ap.	12	July	$16.66	Req.
Starling-Loving University Hospital [1]	Columbus	60	30	30	9	12	141	(62)	6	Ap.	12	July	$16.66	Req.
White Cross Hospital	Columbus	175	35	27	27	..	214	No	8	Ap.	12	Jan. & July	$25	Req.
Miami Valley Hospital	Dayton	yes	yes	84	15	48	360	No	8	Ap.	12	July	$25	Req.
St. Elizabeth Hospital	Dayton	95	75	60	10	23	263	No	4	Ap.	12	July	$25	Req.
Mercy Hospital	Hamilton	40	34	32	24	10	140	No	2	Ap.	12	July	$25	Req.
Springfield City Hospital	Springfield	50	20	52	12	..	134	No	3	Ap.	12	July	$50	Req.
Lucas County Hospital	Toledo	64	74	10	18	170	336	No	8	Ap.	12	July	$50	Req.
Mercy Hospital	Toledo	50	33	18	10	8	119	No	4	Ap.	12	July	$50	Req.
St. Vincent's Hospital	Toledo	125	75	80	50	10	340	No	10	Ap.	12	July	$50	None
Toledo Hospital	Toledo	yes	yes	10	7	..	121	No	6	Ap.	12	July	$50	None
St. Elizabeth's Hospital	Youngstown	60	60	25	55	..	200	No	6	Ap.	12	July	$30	Req.
Youngstown Hospital	Youngstown	68	48	52	50	..	275	No	6	Ap.	12	July	$25	Req.
OKLAHOMA														
St. Anthony Hospital [1]	Oklahoma City	57	50	50	23	..	180	No	4	Ap.	12	June & July	$25 (ii)	Req.
State University Hospital	Oklahoma City	125	100	20	30	..	275	No	(jj)	Ap.	12	July	(kk)	Op.
OREGON														
Emanuel Hospital	Portland	yes	yes	60	yes	..	150	No	5	Ap.	12	July	$25	Op.
Good Samaritan Hospital	Portland	150	80	21	20	63	334	No	9	Ap.	12	July	$20	None
Multnomah Hospital [1]	Portland	60	80	15	20	25	200	(63)	8	Ap.	12	July	$25	None
Portland Sanitarium [1]	Portland	yes	yes	30	yes	yes	132	No	2	Ap.	12	July	$25	Req.
St. Vincent's Hospital	Portland	196	130	30	14	30	400	No	6	Ap.	12	July	$10	None
PENNSYLVANIA														
Abington Memorial Hospital	Abington	53	19	44	12	12	140	No	5	Ex.	12	July	$25	Req.
Allentown Hospital [1]	Allentown	72	40	16	32	40	200	No	6	Ap.	12	June	No	Req.
Sacred Heart Hospital	Allentown	yes	yes	yes	yes	yes	157	No	4	Ap.	12	July	No	Req.
Altoona Hospital [1]	Altoona	65	42	20	17	36	180	No	4	Ap.	12	July	$25	Req.
St. Luke's Hospital	Bethlehem	76	50	20	30	8	184	No	5	Ap.	12	July	No	Req.
Bryn Mawr Hospital	Bryn Mawr	34	30	48	22	6	140	No	5	Ap.	12	July & Sept.	$50	Req.
Chester Hospital [1]	Chester	114	71	19	29	17	250	No	5	Ap.	12	July	$30	Req.
G. F. Geisinger Memorial Hospital	Danville	yes	yes	yes	yes	yes	150	No	7	Ap.	12	July	No	Req.
Easton Hospital [1]	Easton	53	27	12	16	9	117	No	4	Ap.	12	July	$25	Req.
Hamot Hospital	Erie	85	45	50	20	15	215	No	6	Ap.	12	July	$25	Req.
St. Vincent's Hospital	Erie	yes	yes	yes	yes	yes	220	No	8	Ap.	12	July	$25	Req.
Harrisburg Hospital [1]	Harrisburg	yes	yes	52	24	..	236	No	7	Ap.	12	July	$25	Req.
Conemaugh Valley Memorial Hospital [1]	Johnstown	yes	yes	yes	yes	yes	300	No	6	Ap.	12	July	$25	Op.
Lancaster General Hospital [1]	Lancaster	90	45	20	25	..	180	No	6	Ap.	12	July	$25	Req.
McKeesport Hospital	McKeesport	94	53	10	8	..	165	No	6	Ap.	12	July	$25	Req.
Frankford Hospital	Philadelphia	57	24	34	15	..	130	No	6	Ap.	12	July	$30	Req.

Numerical and other references will be found on pages 824 and 825.

Name of Hospital	Location	Number of Beds						Affiliated—For What Service	Internships					Dispensary Service
		Surgical	Medical	Obstetric	Pediatric	Other	Total		Number	By Examination or Appointment	Length of Service in Months	Begin	Salary per Month	
PENNSYLVANIA—Continued														
Frederick Douglass Memorial Hosp.[1] (col.)..	Philadelphia	20	20	10	10	15	75	No	3	Ap.	12	Sept.	No	Req
Germantown Dispensary and Hospital	Philadelphia	82	78	80	30	46	316	No	9	Ap.	18	Jan. & July	No	Req.
Hahnemann Medical College Hospital	Philadelphia	117	104	107	27	54	409	No	15	Ap.	12	July	No	Req.
Hospitals of the Graduate School of Medicine, Polyclinic and Medico-Chirurgical[1]..	Philadelphia	75	50	18	57	121	321	No	14	Ex.	12	July	No	Req.
Hospital of Protestant Episcopal Church..	Philadelphia	257	160	..	35	..	4.2	(64)	16	Ap.	24	Jan. & July	No	Req.
Hospital of the University of Pennsylvania[1]	Philadelphia	128	90	73	37	234	562	No	22	Ap.	24	June & Oct.	No	Req.
Hospital of Woman's Medical College of Pennsylvania[2]	Philadelphia	16	16	44	20	38	134	No	6	Ap.	12	July & Sept.	No	Req.
Jefferson Hospital	Philadelphia	138	131	58	52	277	676	No	26	Ex.	24	June	No	Req.
Jewish Hospital	Philadelphia	91	54	..	18	67	230	(65)	9	Ex.	18	Jan. & July	No	Req.
Lankenau Hospital	Philadelphia	100	100	12	..	43	235	No	8	Ap.	24	†††	No	Req.
Memorial Hospital	Philadelphia	30	25	6	6	33	100	No	4	Ap.	12	July	$25	Req.
Mercy Hospital[1] (col.)	Philadelphia	22	25	25	20	8	100	No	5	Ap.	12	July & Oct.	No	Req.
Methodist Episcopal Hospital[1]	Philadelphia	yes	yes	54	50	..	300	No	8	Ex.	12	July	No	Req.
Misericordia Hospital[1]	Philadelphia	110	60	42	30	29	271	No	11	Both	12	July	No	Req.
Mount Sinai Hospital	Philadelphia	51	77	..	30	..	158	(65)	10	Ex.	12	June	No	Op.
Pennsylvania Hospital	Philadelphia	127	159	50	..	39	375	No	16	Ap.	24	(1-d)	No	Req.
Philadelphia General Hospital[1]	Philadelphia	272	420	98	100	1,100	2,000	(66)	53	Ex.	24	July	No	Req.
Presbyterian Hospital	Philadelphia	93	45	43	24	131	336	No	10	Ex.	24	July	No	Req.
Samaritan Hospital[1]	Philadelphia	75	50	82	27	32	266	No	9	Ex.	18	June	No	Req.
St. Agnes Hospital	Philadelphia	147	88	50	28	18	331	No	10	Ap.	12	July	No	Req.
St. Joseph's Hospital	Philadelphia	19	15	8	18	116	176	(67)	9	Ap.	12	July	No	Req.
St. Mary's Hospital	Philadelphia	96	37	40	25	12	210	No	7	Ap.	12	July	No	Req.
U. S. Naval Hospital	Philadelphia	175	338	..	..	78	591	(68)	9	Ex.	12	July	(b)	None
Women's Homeopathic Hospital[1]	Philadelphia	50	40	60	30	20	200	No	4	Ap.	12	July	$20	Req.
Woman's Hospital of Philadelphia[2]	Philadelphia	61	27	70	21	6	185	No	8	Ap.	12	¶¶	No	Req.
Allegheny General Hospital	Pittsburgh	148	58	44	57	98	405	No	12	Ap.	12	July	No	Req.
Mercy Hospital[1]	Pittsburgh	yes	yes	yes	yes	yes	600	No	18	Ap.	12	July	No	Req.
Montefiore Hospital	Pittsburgh	yes	yes	yes	yes	yes	80§	No	3	Ap.	12	July	$35	Req.
Passavant Hospital[2]	Pittsburgh	24	20	28	14	72	158	No	6	Ap.	12	July	No	Req.
Pittsburgh Homeopathic Hospital[1]	Pittsburgh	36	30	36	20	153	275	No	8	Ap.	12	July	No	Req.
Pittsburgh Hospital[1]	Pittsburgh	110	60	45	10	..	225	No	6	Ap.	12	July	$25	Req.
Presbyterian Hospital	Pittsburgh	49	19	22	22	88	200	(69)	6	Ap.	12	July	No	Req.
St. Francis Hospital[1]	Pittsburgh	155	160	25	35	225	600	No	18	Ap.	12	July	No	Req.
St. John's General Hospital	Pittsburgh	101	25	25	47	4	202	No	5	Ap.	12	July	No	Op.
St. Joseph's Hospital and Dispensary	Pittsburgh	45	35	4	18	28	130	No	4	Ap.	12	July	No	Req.
St. Margaret Memorial Hospital	Pittsburgh	58	46	17	30	..	151	No	4	Ap.	12	July	$25	Req.
South Side Hospital[1]	Pittsburgh	59	58	20	28	60	225	No	7	Ap.	12	July	No	Req.
Western Pennsylvania Hospital[1]	Pittsburgh	249	131	32	27	61	500	No	20	Ap.	12	July	No	Req.
Pottsville Hospital	Pottsville	60	32	16	9	33	150	No	4	Ap.	12	July	$25	None
Reading Hospital[1]	Reading	yes	yes	yes	yes	yes	300	No	6	Ap.	12	July	No	Req.
St. Joseph's Hospital	Reading	63	54	27	16	20	180	No	5	Ap.	12	July	$25	Req.
Robert Packer Hospital	Sayre	yes	yes	yes	yes	yes	235	No	6	Ap.	12	July	$8.33	Req.
Hahnemann Hospital	Scranton	20	20	11	12	62	125	No	3	Ap.	12	July	$12.50	Req.
Scranton State Hospital[1]	Scranton	81	59	14	12	22	188	(70)	6	Ap.	12	July	$15	None
Uniontown Hospital	Uniontown	78	50	20	5	25	178	No	6	Ap.	12	July	$25	Req.
Chester County Hospital	West Chester	17	17	25	18	38	115	No	3	Ap.	12	July	$50	Req.
Mercy Hospital	Wilkes-Barre	60	46	14	20	20	160	No	4	Ap.	12	July	No	Req.
Wilkes-Barre General Hospital[1]	Wilkes-Barre	75	34	58	10	131	308	No	6	Ap.	12	July	No	Req.
Columbia Hospital[1]	Wilkinsburg	72	65	38	15	6	196	No	5	Ap.	12	July	No	Req.
York Hospital	York	37	34	10	25	..	106	No	3	Ap.	12	July	$35	Req.
RHODE ISLAND														
State Infirmary[1]	Howard	yes	yes	yes	yes	yes	682	(71)	2	Ap.	12	Varies	$50	None
Memorial Hospital	Pawtucket	yes	yes	..	yes	yes	100	No	3	Ap.	12	(1-l)	$16.67	Req.
Rhode Island Hospital	Providence	250	150	..	35	165	600	No	14	Ap.	21	†††	No	None
St. Joseph's Hospital	Providence	yes	yes	15	20	..	185	No	4	Ap.	12	July	No	None
SOUTH CAROLINA														
Roper Hospital	Charleston	100	104	30	30	36	300	No	(o)	Ap.	12	July	No	Req.
Columbia Hospital of Richland County	Columbia	24	12	9	14	66	125	No	2	Ap.	12	July	$30	Req.
South Carolina Baptist Hospital[1]	Columbia	30	40	10	21	..	101	No	2	Ap.	12	June	$50	Op.
Greenville City Hospital	Greenville	yes	yes	10	12	..	125	No	3	Ap.	12	July	$25 (a)	Req.
TENNESSEE														
Baroness Erlanger Hospital	Chattanooga	75	75	25	20	5	200	No	4	Ap.	12	July	$50	Op.
Knoxville General Hospital[1]	Knoxville	yes	yes	yes	yes	yes	216	No	8	Ap.	12	July	$50	Req.
Baptist Memorial Hospital[1]	Memphis	yes	yes	yes	yes	yes	350	No	4	Ap.	12	July	$50	None
Memphis General Hospital	Memphis	110	80	70	30	60	350	No	18	Ap.	18	**	$25	Op.
St. Joseph's Hosptial	Memphis	yes	yes	35	25	..	375	No	6	Ap.	12	July	$50	None
Geo. W. Hubbard Hospital (col.)	Nashville	42	44	10	27	17	140	No	4	Ex.	12	(1-n)	No	Req.
Nashville General Hospital	Nashville	40	25	20	26	39	150	No	6	Ap.	12	July	$25	Req.
Protestant Hospital	Nashville	yes	yes	yes	yes	yes	132	No	4	Ap.	12	July	$50	None
St. Thomas Hospital	Nashville	125	35	25	25	..	210	(72)	6	Ap.	12	July	$10	None
Vanderbilt University Hospital	Nashville	yes	yes	yes	yes	yes	200	No	10	Ap.	12	July	No	.....
TEXAS														
Hotel Dieu Hospital	Beaumont	55	72	14	30	14	175	No	1	Ap.	12	June	No	Op.
Baylor Hospital[1]	Dallas	178	116	82	38	..	414	No	16	Ap.	12	July	$25	Op.
Parkland Hospital	Dallas	yes	yes	30	9	26	250	(73)	9	Ap.	12	July	$25	Req.
St. Paul's Sanitarium	Dallas	160	50	36	30	30	306	No	10	Ap.	12-24	July & Oct.	$25	Req.
William Beaumont General Hospital	El Paso	141	237	25	yes	..	403	No	7	Ap.	12	Aug.	(b)	Req.
Harris Hospital	Ft. Worth	yes	yes	yes	yes	yes	100	No	2	Ap.	12	July	$25	Req.
John Sealy Hospital[1]	Galveston	98	144	22	15	45	324	No	8	Ap.	12	June & July	No	Req.
St. Mary's Infirmary	Galveston	yes	yes	yes	yes	yes	200	(74)	2	Ap.	12	June	No	Op.
Baptist Hospital[1]	Houston	yes	yes	yes	yes	yes	200	No	4	Ap.	12	July	$50	Req.
St. Joseph's Infirmary[1]	Houston	166	60	18	6	..	250	No	4	Ap.	12	July	$45	None
Robert B. Green Memorial Hospital	San Antonio	34	17	15	20	49	135	No	6	Ap.	12	July	$25	Req.
Santa Rosa Infirmary	San Antonio	79	54	17	10	144	304	No	8	Ap.	12	June	$40	Req.
Station Hospital, Fort Sam Houston	San Antonio	285	500	15	..	..	800	No	11	Ap.	12	Aug.	(b)	Req.
Gulf, Colorado & Sante Fe Hospital	Temple	yes	yes	..	..	..	147	(75)	2	Ap.	12	Jan. & July	$50	None
Scott and White Hospital	Temple	yes	yes	yes	yes	yes	145	(76)	3	Ap.	12	July	$30	None
Providence Sanitarium	Waco	yes	yes	yes	yes	yes	150	No	2	Ap.	12	July	$50	Op.
UTAH														
Thomas D. Dee Memorial Hospital	Ogden	67	38	20	10	5	140	No	2	Ap.	12	July	$50	Req.
Dr. Groves' Latter Day Saints Hospital	Salt Lake City	108	59	36	20	21	244	No	5	Ap.	12	July	$25	None
Holy Cross Hospital	Salt Lake City	112	45	35	20	13	225	No	3	Ap.	12	July	$50	None
Salt Lake County General Hospital	Salt Lake City	41	50	11	14	81	197	No	4	Ap.	12	July	$30 (mm)	Req.
St. Mark's Hospital	Salt Lake City	yes	yes	13	20	..	150	No	2	Ap.	12	July	$50	None
VERMONT														
Mary Fletcher Hospital[1]	Burlington	yes	yes	15	12	..	145	No	5	Ap.	12	July & Sept.	$50	Req.
VIRGINIA														
Hospital of St. Vincent de Paul	Norfolk	105	60	44	45	..	254	No	4	Ap.	12	July	$25	Req.
Norfolk Protestant Hospital	Norfolk	yes	yes	yes	yes	..	150	No	3	Ap.	12	July	$30	None

Numerical and other references will be found on pages 824 and 825.

Name of Hospital	Location	Number of Beds: Surgical	Medical	Obstetric	Pediatric	Other	Total	Affiliated—For What Service	Internships: Number	By Examination or Appointment	Length of Service in Months	Begin	Salary per Month	Dispensary Service
VIRGINIA—Continued														
U. S. Marine Hospital No. 82	Norfolk	89	61	..	..	67	217	(77)	2	Ap.	12	July	(b)	None
U. S. Naval Hospital	Norfolk	yes	yes	..	..	..	816	(78)	5	Both	12	Indef.	(b)	None
Medical College of Virginia, Hospital Div.	Richmond	yes	yes	yes	yes	..	424	No	16	Ap.	12	(1-h)	$25	Req.
Jefferson Hospital	Roanoke	yes	yes	yes	yes	yes	100	No	3	Ap.	12	July	No	None
University of Virginia Hospital [1]	University	75	60	25	40	60	260	(79)	18	Ap.	27	(1-g)	No	Req.
WASHINGTON														
Columbus Hospital	Seattle	94	75	25	6	..	200	No	2	Ap.	12	July	$35	None
King County Hospital [1]	Seattle	yes	yes	yes	yes	yes	220	No	3	Ap.	12	July	$50	Op.
Seattle City Hospital	Seattle	yes	yes	yes	yes	yes	125	(80)	6	Ap.	12	July	$75	Req.
Seattle General Hospital [1]	Seattle	yes	yes	yes	..	..	120	(81)	4	Ap.	12	July & Sept.	$25	None
Swedish Hospital	Seattle	yes	yes	47	..	..	167	(81)	4	Ap.	12	July & Aug.	$50	Req.
Virginia Mason Hospital	Seattle	39	31	30	..	..	100	No	2	Ap.	12	July	$50	Req.
Maria Beard Deaconess Hospital	Spokane	yes	yes	60	12	..	202	(82)	3	Ap.	12	July	$50	Op.
St. Luke's Hospital	Spokane	60	40	30	10	20	160	No	3	Ap.	12	July	$50	Op.
Northern Pacific Beneficial Association Hospital	Tacoma	50	60	10	..	..	120	(83)	2	Ap.	12	July	$25	Req.
Tacoma General Hospital [1]	Tacoma	120	30	32	10	48	240	No	3	Ap.	12	July	$50	None
WEST VIRGINIA														
Charleston General Hospital	Charleston	90	50	26	8	26	200	(84)	4	Ap.	12	July	$50	Req.
Ohio Valley General Hospital	Wheeling	80	40	23	30	..	173	No	4	Ap.	12	June	$40	Req.
Wheeling Hospital	Wheeling	129	55	23	6	12	225	No	4	Ap.	12	July	$25	None
WISCONSIN														
St. Elizabeth Hospital	Appleton	50	50	50	25	25	200	No	2	Ap.	12	July	$50	Op.
St. Joseph's Hospital	Ashland	75	50	25	15	..	165	No	1	Ap.	12	July	$25 (a)	Op.
St. Agnes Hospital [1]	Fond du Lac	88	56	34	34	38	250	No	2	Ap.	12	July	$50	None
La Crosse Lutheran Hospital	La Crosse	60	30	10	10	..	110	No	2	Ap.	12	July	$50	None
St. Francis Hospital [1]	La Crosse	90	60	30	15	20	215	No	4	Ap.	12	July	$30	None
Madison General Hospital	Madison	68	16	31	10	..	125	No	3	Ap.	12	July	$50	Req.
St. Mary's Hospital	Madison	yes	yes	yes	yes	yes	200	No	6	Ap.	12	July	$50	None
State of Wisconsin General Hospital [1]	Madison	yes	yes	yes	yes	yes	450	No	12	Ap.	12	Jan. & July	No	Req.
St. Joseph's Hospital	Marshfield	50	60	15	15	10	150	No	3	Ap.	12	July	$30	Req.
Columbia Hospital	Milwaukee	yes	yes	18	yes	yes	109	(85)	8	Ap.	24	July	$25	Req.
Evangelical Deaconess Hospital	Milwaukee	yes	yes	22	yes	yes	120	No	4	Ap.	12	June & July	$50	Req.
Marquette University Hospital [1]	Milwaukee	33	13	20	10	79	155	No	4	Ap.	12	July	$50	None
Milwaukee Hospital	Milwaukee	yes	yes	60	10	..	243	No	8	Ap.	12	July & March	$25	None
Mount Sinai Hospital	Milwaukee	yes	yes	54	yes	..	156	No	4	Ap.	12	July	$25	Op.
St. Joseph's Hospital	Milwaukee	63	15	36	6	15	135	No	3	Ap.	12	Jan. & June	$25	Req.
St. Mary's Hospital	Milwaukee	103	30	54	16	..	203	No	5	Ap.	12	July	$25	Req.
Mercy and St. Mary's Hospitals	Oshkosh	95	35	34	16	..	180	No	3	Ap.	12	July	No	None
St. Mary's Hospital	Superior	yes	yes	25	19	..	103	No	1	Ap.	12	July	$25	Req.
Milwaukee County Hospital	Wauwatosa	yes	yes	yes	yes	yes	308	(86)	15	Ex.	12	July	$25	Req.
CANADA														
University of Alberta Hospital [1]	Edmonton, Alta.	51	65	20	13	42	191	(87)	6	Ex.	12	May	$25	Req.
Montreal General Hospital	Montreal, Que.	125	90	..	24	161	400	(88)	35	Ap.	12	July	No	Req.
Royal Victoria Hospital [1]	Montreal, Que.	237	123	75	30	285	750	(88)	32	Ap.	12	July	No	Op.
Toronto General Hospital [1]	Toronto, Ont.	324	207	62	..	157	750	No	35	Ap.	12	July	No	Req.
Vancouver General Hospital	Vancouver, B. C.	225	210	63	124	278	900	No	12	Ap.	12	June	$25	Op.
Winnipeg General Hospital [1]	Winnipeg, Man.	230	210	80	40	90	650	No	24	Ap.	12	June & Dec.	No	Op.
CANAL ZONE														
Ancon Hospital	Ancon	100	100	50	50	100	400	No	6	Ap.	12	June	$75	None
HAWAII														
Queen's Hospital	Honolulu	yes	yes	yes	yes	yes	300	No	5	Ap.	15	†††	(nn)	None
PHILIPPINE ISLANDS														
Philippine General Hospital [1]	Manila	184	124	48	55	143	554	No	30	Ap. (z)	30	April	No	Req.
FOREIGN														
Peking Union Medical College Hospital [1]	Peking, China	yes	yes	yes	yes	yes	224	No	20	Ap.	12	July	$15	Req.

(a) Bonus of $300.
(b) Salary established by Government Pay Tables according to rank and service, usually $166.67.
(c) Fifteen dollars a months for first 6 months, $20 a month for last 6 months.
(d) Twelve juniors, 9 seniors.
(e) Juniors $10 a month, seniors $25 a month.
(f) Plus $10 bonus for 95% histories.
(g) Bonus of $100.
(h) $25, $40 and $50.
(i) Head intern, $75 a month; others, $25 a month.
(j) Bonus of $15 a month.
(k) Bonus of $100 each 6 months.
(l) Twenty-five dollars a month for first 6 months, $35 a month for last 6 months.
(m) Seventeen juniors, 6 seniors.
(n) Juniors $10 a month, seniors $15 a month.
(o) Ten seniors, 6 juniors.
(p) Twenty-five dollars a month for first 6 months, $50 a month for last 6 months
(q) Plus 50% of accident fees.
(r) Twelve seniors, 12 juniors.
(s) Thirty dollars a months for first 6 months, $50 a month for last 6 months.
(t) Ten dollars a month for 11 months and $190 on completion of 12 months' satisfactory service.
(u) Seniors $25 a month.
(v) Bonus of $120.
(w) Thirty dollars a month for last three months.
(x) Juniors $20 a month, seniors $50 a month.
(y) Bonus of $180.
(z) All internships for 1927 reserved for the fifth year students of the College of Medicine, University of the Philippines.
(aa) Six juniors, 2 seniors.
(bb) Juniors $16.70 a month, seniors $42 a month.
(cc) Twenty-five dollars a month; last month $100.
(dd) Fifty dollars a year.
(ee) Bonus of $75.
(ff) Fifty dollars a month for first 6 months, $75 a month for next 6 months and $100 a month for last 6 months.
(gg) Thirty-five dollars a month first year, $45 a month second year.
(hh) Fifty dollars a month first 4 months, $75 a month next four months, $100 a month last 4 months; $100 bonus.
(ii) Bonus of $200.
(jj) Eight juniors, 2 seniors.
(kk) Juniors $25 a month, seniors $100 a month.
(mm) Bonus of $240.
(nn) Fifty dollars a month for first 6 months, $75 a month for next 3 months and $100 a month for last 6 months.
(pp) Subscription to J. A. M. A. and local medical publication required.
§ Addition under construction.
* Twelve months with the privilege of an additional twelve months.
** Every two months.
*** January, March, July, September and November.
† January, April, August and October.
†† January, July and September.
††† January, April, July and October.
†††† Every ten weeks.
# January, April, June and October.
April, July and October.
June, July and October.
¶ June, July and August.
¶¶ April, July and August.
¶¶¶ Medicine, surgery and obstetrics, 20 months and 2 weeks; pediatrics, 10 months.
++ Medicine, surgery and obstetrics, first Monday in March, July and November; pediatrics, first Monday in February, April, June, August, October and December.
+++ April, August and December.
(1-a) January, April, July and September.
(1-b) March, July and November.
(1-c) March, June, September and December.
(1-d) Every 6 weeks beginning first of each year.
(1-e) January, July and October.
(1-f) April, August and December.
(1-g) Every three months.
(1-h) July, August and September.
(1-i) Spring and fall.
(1-j) February, July and November.
(1-k) January, May and September.
(1-l) February, June and October.
(1-m) January, April, August and November.
(1-n) July, September and December.
1. Women interns admitted.
2. Women interns only.

Affiliations as referred to in column headed: "Affiliated—For What Service."

3. Los Angeles Receiving Hospital.
4. Children's Hospital, Los Angeles, pediatrics.
5. Children's Hospital, Los Angeles, and the maternity service of the Los Angeles City Health Department, pediatrics and obstetrics.
6. Los Angeles Receiving Hospital, emergency service.
7. Mount Zion Hospital, San Francisco, and San Francisco Hospital, obstetrics.
8. Los Angeles General Hospital and Mercy Hosptial, San Diego, obstetrics and outpatient service.
9. University of California Hospital, San Francisco, outpatient service.
10. Glen Lake Sanatorium, Oak Terrace, tuberculosis.
11. Napa State Hospital, Imola, psychiatry.
12. St. Francis Hospital, San Francisco, obstetrics.
13. Stanford University Hospital, University of California Hospital and San Francisco Hospital, obstetrics, pediatrics and gynecology.
14. Internship in these hospitals includes service in: Highland Hospital, Oakland; Alameda County Hospital, San Leandro; Arroyo Sanatorium and Del Valle Farm, Livermore.
15. Steele Memorial Hospital, Denver, contagious diseases.
16. St. Joseph's Hospital and Children's Hospital, Denver, obstetrics, pediatrics and acute surgery.
17. Anthony N. Brady Maternity Hospital, Albany, and Bender Laboratory, Albany, obstetrics and pathology.
18. Hartford Isolation Hospital, contagious diseases.
19. Children's Hospital, Washington, D. C., pediatrics.
20. Affiliation for obstetrics arranged by intern with approval of Commanding Officer.
21. County Tuberculosis Sanatorium, Macon.
22. Chicago-Winfield Tuberculosis Sanitarium, Winfield, and Municipal Contagious Disease Hospital, Chicago.
23. Annie W. Durand Hospital, Chicago, contagious diseases.
24. Norwegian-American Hospital, Chicago, obstetrics, gynecology and pediatrics.
25. James Whitcomb Riley Hospital for Children, Indianapolis, pediatrics.
26. Broadlawns, Polk County Tuberculosis Sanitarium, Des Moines.
27. Touro Infirmary, New Orleans, obstetrics, pediatrics and gynecology.
28. Shreveport Charity Hospital.
29. Internship in these hospitals includes service in the General, Psychopathic and Tuberculosis Hospitals, also the Infirmary.
30. Children's Hospital, Boston, and Massachusetts Eye and Ear Infirmary, Boston.
31. Boston City Hospital, obstetrics.
32. Herman Kiefer Hospital, Detroit, obstetrics.
33. Herman Kiefer Hospital, Detroit, tuberculosis and contagious diseases.
34. Herman Kiefer Hospital, Detroit, obstetrics and contagious diseases; also Children's Hospital, Detroit.
35. St. Joseph's Retreat, Dearborn, psychiatry.
36. Shriners' Hospital for Crippled Children, St. Paul, orthopedics; Ancker Hospital, St. Paul, contagious diseases.
37. Gillette State Hospital for Crippled Children, St. Paul, pediatrics.
38. Salvation Army Hospital, St. Louis, obstetrics.
39. Shriners' Hospital, St. Louis, and St. Louis Children's Hospital, orthopedic surgery and general children's surgery.
40. Jewish Sanatorium, Anglum, tuberculosis.
41. Robert Koch Hospital, St. Louis, tuberculosis; also City Isolation Hospital, City Sanitarium, and City Infirmary.
42. Mt. St. Rose Sanatorium, St. Louis, tuberculosis.
43. St. Mary's Hospital, St. Louis, obstetrics.
44. Municipal Hospital, Atlantic City, contagious diseases.
45. St. Elizabeth's Hospital, Elizabeth, and New York Postgraduate Medical School and Hospital, obstetrics and gynecology.
46. Jersey City Hospital, obstetrics.
47. Newark Maternity Hospital, obstetrics.
48. Methodist Episcopal Hospital, Brooklyn, obstetrics.
49. St. Mary's Maternity Hospital, Emergency Hospital and Providence Retreat, Buffalo, obstretics, emergencies and psychiatry.
50. Buffalo Hospital of the Sisters of Charity and St. Mary's Maternity Hospital, medicine, obstetrics and pediatrics.
51. Reconstruction Hospital, New York City, orthopedics.
52. New York Foundling Hospital, obstetrics and pediatrics.
53. Rochester Municipal Hospital.
54. Children's Hospital, Akron, pediatrics and orthopedics.
55. Bethesda Hospital, Cincinnati, pediatrics.
56. Cincinnati Tuberculosis Sanatorium.
57. St. Joseph's Infant Asylum, Cincinnati, obstetrics.
58. Cleveland Maternity Hospital, pediatrics and obstetrics.
59. Cleveland City Hospital, psychiatry and contagious diseases.
60. St. Ann's Maternity Hospital, Cleveland, obstetrics.
61. Starling-Loving University Hospital, Columbus, obstetrics.
62. Children's Hospital, Columbus, pediatrics.
63. Shriners' Hospital for Crippled Children, Portland, and the Doernbecher Memorial Hospital, Portland, pediatrics and orthopedics.
64. Kensington Hospital for Women, Philadelphia, obstetrics.
65. Jewish Maternity Hospital, Philadelphia, obstetrics.
66. Philadelphia Hospital for Contagious Diseases.
67. St. Vincent's Hospital, Philadelphia, obstetrics.
68. Maternity Hospital, Philadelphia, obstetrics.
69. Elizabeth Steel Magee Hospital, Pittsburgh, obstetrics.
70. Municipal Hospital, Scranton, contagious diseases.
71. Rhode Island Hospital, Providence, clinics.
72. The Vanderbilt University Hospital, Nashville, laboratory.
73. Woodlawn Sanatorium, Dallas, tuberculosis; Union Hospital, Dallas, contagious diseases.
74. John Sealy Hospital, Galveston, outpatient service.
75. Scott and White Hospital, Temple, pediatrics and obstetrics.
76. Gulf, Colorado and Santa Fe Hospital, Temple, additional medicine and surgery.
77. Children's Clinic of the Norfolk City Union of the King's Daughters, Inc., Portsmouth, pediatrics; Norfolk Protestant Hospital, obstetrics.
78. King's Daughters' Hospital, Portsmouth, obstetrics, gynecology and pediatrics.
79. Blue Ridge Sanatorium, Charlottesville, tuberculosis.
80. Firland Sanatorium, Richmond Highlands, tuberculosis and contagious diseases.
81. Children's Orthopedic Hospital, Seattle, orthopedics and pediatrics.
82. Edgecliff Sanatorium, Spokane, tuberculosis.
83. Pierce County Hospital, Tacoma, obstetrics and pediatrics.
84. Hill Crest Sanatorium, Charleston, tuberculosis.
85. Milwaukee Children's Hospital, pediatrics, and South View Municipal Hospital, contagious diseases.
86. Milwaukee County Home for Children, Wauwatosa, pediatrics.
87. Misericordia, Edmonton General and Royal Alexandra Hospitals, obtetrics, communicable diseases and surgery.
88. Alexandra Hospital for Contagious Diseases, Montreal.

ESSENTIALS IN A HOSPITAL APPROVED FOR INTERNS

Revised to March 12, 1927

I. General Statements

1. WELFARE OF THE PATIENTS.—Only hospitals in which the entire plant and personnel constantly function primarily in the interest of the patient are acceptable for accrediting as institutions for the training of interns, however abundant the equipment of the hospital may be.

2. MINIMUM NUMBER OF BEDS AND PATIENTS.—The hospital should have at least 100 beds and an average of seventy-five or more patients.

3. ONLY GENERAL HOSPITALS ELIGIBLE.—The hospital shall provide a variety of medical, surgical, obstetric and children patients in reasonable proportion, so as to offer interns and graduate students that clinical training which every medical practitioner should have. A hospital that is lacking in types of patients, such as maternity cases or children, may, by an approved working affiliation with other nearby institutions, supply the additional clinical material necessary. The rotating service is recommended, but teaching hospitals of high grade and reputable medical schools which have long followed the straight service should be permitted to continue that method without prejudice.

4. INTERNS' LIVING QUARTERS.—The hospital shall provide reasonably comfortable living quarters for the interns with opportunities for recreation, both indoor and outdoor, appropriate to the locality and environment of the hospital.

II. The Staff of the Hospital

1. CHARACTER OF STAFF.—There must be an organized staff of ethical physicians who hold the degree of doctor of medicine from acceptable medical schools, who are of unquestioned professional and moral integrity; who are proficient in general practice or in the special fields to which they devote themselves; who give personal attention to the patients under their charge, and who will provide adequate facilities, instruction and that sympathetic cooperation without which interns and graduate students cannot obtain the practical training for which they are serving the hospital.

2. GRADUATES IN MEDICINE.—The hospital must not only confine membership on its staff to reputable practitioners who have received the degree of doctor of medicine from medical schools considered acceptable by the Council on Medical Education and Hospitals of the American Medical Association, but also must apply this ruling to every person permitted to treat or prescribe for the sick in the hospital or in any of its departments. The ruling does not apply, of course, to the treatment of patients by nurses, masseurs and other like assistants, when acting under the orders of any physician on the attending staff.

3. RESIDENT PHYSICIANS.—It is desirable in all instances, and required in hospitals with four or more interns, that there be one or more full time resident physicians who have had at

least one year's intern experience, whose duties shall include cooperation with the members of the staff in supervising the work and instruction of the interns and graduate students. Residents, however, must not be actually substitutes for the staff physicians, who shall individually be responsible for the intern's welfare, instruction and practical training. The interns themselves, however, should assume responsibility for the examination and treatment of patients while they, in turn, are under the supervision of the staff physicians of the hospital.

4. STAFF CONFERENCES AND MEETINGS.—It is expected that there shall be, at least fortnightly, clinical-pathologic conferences or other regular staff meetings at which histories and clinical findings in selected patients may be reviewed and particularly where, in the death of patients, special study, including necropsy findings when possible, shall be undertaken. The interns and graduate students should be requested to attend these meetings and to take part in the discussions and procedures.

III. The Equipment of the Hospital

1. LABORATORY.—There must be a clinical laboratory in charge of a pathologist of attainments and standing at least equal to those of other staff members, who shall be in charge of the laboratory, supervise the work of, and give instruction to the interns. The laboratory work of the interns shall include not only the simple clinical tests, but also the more technical chemical, bacteriologic and serologic work and examinations.

2. NECROPSIES.—The percentage of necropsies in a hospital has come to be recognized as an index of its genuine educational activities. After January 1, 1928, no hospital will be approved for the training of interns which does not have a record of necropsies at least 10 per cent of all deaths in the hospital and after January 1, 1929, the minimum required will be 15 per cent. The records of these necropsies must be kept on file and shall include a protocol of each autopsy as well as a statement of the clinical findings.

3. ROENTGEN RAY.—The roentgen-ray department shall be in charge of a roentgenologist whose attainments are at least equal to those of other staff members and who shall supervise and instruct the interns in all essential phases of roentgenology. The department must be equipped to do roentgenographic, fluoroscopic, and therapeutic work. The intern should receive instruction both in regard to the technic and dangers of roentgen-ray application and also in plate reading and in the therapeutic uses of the roentgen ray.

4. ANESTHESIA.—The hospital is expected to provide equipment and facilities for, and expert supervision, preferably by a staff member, over the administering of the usual kinds of local and general anesthetics and the instruction of interns in anesthesiology.

5. MEDICAL LIBRARY.—There shall be a working medical library, in charge of a librarian, which should contain a useful selection of late editions of standard text and reference books and current files of not less than ten of the better medical journals. The library should be inside the hospital building and located where it is readily accessible to the interns and staff members. Collections of choice reference books in pathology and clinical diagnosis and in roentgen-ray work should be found respectively in the pathologic and roentgenologic laboratories.

IV. Histories and Records

1. COMPLETE HISTORIES.—There must be complete histories, giving the patient's complaint, physical examination at time of admission to hospital, preliminary diagnosis, laboratory findings, description of operation, if any, daily record of case, final diagnosis, condition and date when discharged from hospital, end-results, and in case of death, necropsy findings, if necropsy is performed.

2. ENDORSEMENT OF HISTORIES.—The histories should show, by signatures or initials, all persons writing them or parts of them, as well as the staff members by whom the histories are verified. Likewise all orders and progress notes should be initialed or signed.

3. RECORDS.—The records should be in charge of some competent person, preferably a trained office secretary; they should be kept complete and should include an alphabetical index of the patients, and another arranged by diagnoses, and the record should be so filed as to be easily accessible from either index.

V. The Work of the Intern

1. SUPERVISED RESPONSIBILITY.—The intern should be a graduate of a medical college rated in classes A or B by the Council on Medical Education and Hospitals. He should assume, under careful supervision, an increasing responsibility in the diagnosis of diseases, daily observation, care and treatment of the patients under his service.

2. TYPE OF INTERN SERVICE.—In the rotation service there should be a smoothly working plan by which interns proceed in a certain routine through the various services. There should not be more than four or five changes in any single year's service; more than this cause unnecessary confusion.

3. SCOPE OF INTERN INSTRUCTION.—The hospital, through designated members of its staff, should provide adequate instruction and experience for the interns who, in effect, are fifth year medical students, in medicine, pediatrics, surgery, obstetrics and laboratory work throughout their terms of service. For the development of any physician in general practice the importance of a thorough training in pediatrics and obstetrics is especially emphasized.

4. LENGTH OF INTERN SERVICE.—The intern service should cover at least twelve months, and may to great advantage be extended through a longer period.

5. ASSIGNMENT OF WORK.—The number of patients assigned to each intern and the routine work required of him should not demand more than eight (at most, ten) hours daily. He should have ample time not only to study and read up about his patients, but also to permit of a reasonable amount of recreation.

6. GRADING OF INTERN SERVICE.—In larger hospitals, or those having four or more interns, the interns may with advantage begin their work at different times of the year and pass through junior and senior services, or the services may be further subdivided into first and second junior and first and second senior services.* Through some such arrangement the hospital retains a constant supply of experienced interns. The training of the intern is enhanced thereby, since junior interns will secure considerable instruction from the seniors.

7. CLINICAL LABORATORY WORK.—The intern should himself perform the laboratory work, or at least have the full benefit of laboratory findings, for each patient under his charge. A reasonable amount of work in the various laboratory tests—urine, blood, gastric contents, stools—should be performed by the intern to give him the desired amount of laboratory experience, but he should not have to undergo an unreasonable amount of routine work. Laboratory experience in the more technical, chemical, bacteriologic and serologic work may well be obtained in assisting the expert pathologist.

8. NECROPSIES.—The intern, as far as possible, should obtain experience in making necropsies under the direction of the pathologist. The hospital also should obtain as high a percentage of necropsies as is possible. This percentage is usually looked on as an index of the pathologic teaching carried on as well as of the general professional standard in the hospital.

9. ANESTHESIA.—The intern should obtain instruction and experience in the various kinds of anesthetics, under experienced medical supervision unless he is known to have had adequate instruction in his undergraduate medical course.

10. OBSTETRICS.—The intern should have experience, under the supervision of designated members of the staff, in the delivery of normal maternity patients and also in assisting in all abnormal cases.

11. ROENTGEN RAY.—The intern should receive from the roentgenologist or other qualified member of the hospital

* See appendix.

staff a reasonable amount of instruction in the technic and the therapeutics of the roentgen ray, as well as in the interpretation of plates and fluoroscopic findings.

12. DIETETICS.—The intern should receive some instruction by a qualified staff member, in the feeding of both infants and adults, as required in various diseases or conditions, and a reasonable amount of technical experience under a trained dietitian is desirable.

13. RULES REGARDING INTERNS.—The hospital should have a set of printed or written rules and regulations defining the rights, duties and privileges of the interns, a copy of which should be furnished to each intern.

14. PURPOSE OF INTERNSHIP.—It is emphasized that the object of the general internship is to round out the medical graduate's training, so as to enable him to enter on the general practice of medicine and not to equip him to enter directly on any specialty. For the latter he should obtain further and different instruction.

15. FAITHFUL SERVICE FROM INTERN EXPECTED.—For all the privileges granted the intern it is understood, of course, that the hospital has the right to expect faithful service in return.

VI. Admission to the Approved List

1. APPLICATION FOR APPROVAL.—Hospitals that want to be accredited for intern training, either as general or as special hospitals, should apply to the Council on Medical Education and Hospitals of the American Medical Association, 535 North Dearborn Street, Chicago.

2. SURVEY REPORT.—A hospital Survey Report Blank in duplicate will be supplied on application. This should be filled out carefully by the superintendent or by some staff member who is acquainted with the intern service in the hospital. In addition, the Council desires also: (*a*) a list of all physicians who practice in the hospital; (*b*) an outline of the course, or order, in which the intern progresses through the different departments, and (*c*) the name of responsible instructor, length of time and amount of work required of the intern in each department.

VII. Internships in Special Hospitals

1. RESIDENCIES.—It is hoped that hereafter all internships or residencies in the specialties, whether offered in special hospitals or the special departments of general hospitals, will be open only to those physicians who have already completed an internship in a general hospital or have obtained its full equivalent in general practice. The turning out of amateur specialists should be discontinued.

APPENDIX

Suggestive Schemes for the Rotation Service*

These plans are submitted for their suggestive value only. The hospitals are free to adopt them, to modify them or to adopt other plans for rotation so long as the principles in the above outline are observed.

PLAN 1

The following is suggested for a general hospital of 100 beds with four interns, two entering January 1 and two July 1, and serving three months in each of four services or a total of twelve months, as follows:

		A	B	C	D	Etc.
First	3 months.....	Lab.	Obs.			
Second	3 months.....	Surg.	Lab.			
Third	3 months.....	Med.	Surg.	Lab.	Obs.	
Fourth	3 months.....	Obs.	Med.	Surg.	Lab.	
First	3 months.....	Lab.	Obs.	Med.	Surg.	
Second	3 months.....	Surg.	Lab.	Obs.	Med.	etc.

PLAN 2

Intern service in hospital of 200 beds having departments of medicine, two divisions of surgery, obstetrics, pediatrics and laboratory. There are six interns, three coming in January and three in July, and spending two months in each of six services, or a total of twelve months, as follows:

		A	B	C	D	E	F
First	2 months..	Lab.	Med.	Surg. 1	Surg. 2	Obs.	Ped.
Second	2 months..	Ped.	Lab.	Med.	Surg. 1	Surg. 2	Obs.
Third	2 months..	Obs.	Ped.	Lab.	Med.	Surg. 1	Surg. 2
Fourth	2 months..	Surg. 2	Obs.	Ped.	Lab.	Med.	Surg. 1
Fifth	2 months..	Surg. 1	Surg. 2	Obs.	Ped.	Lab.	Med.
Sixth	2 months..	Med.	Surg. 1	Surg. 2	Obs.	Ped.	Lab.

PLAN 3

Intern service in hospitals of 300 beds having departments of medicine, two surgical divisions, obstetrics, orthopedics and pediatrics, and laboratory, with twelve interns beginning each July, serving twenty-four months, and spend two months in each of six services, or twelve months as a junior and as a senior during the next twelve months. There is also a resident, who serves a third twelve months or longer.

		A	B	C	D	E	F
First	2 months..	Ortho.	Med.	Surg. 1	Surg. 2	Obs.	Ped.
Second	2 months..	Ped.	Ortho.	Med.	Surg. 1	Surg. 2	Obs.
Third	2 months..	Obs.	Ped.	Ortho.	Med.	Surg. 1	Surg. 2
Fourth	2 months..	Surg. 2	Obs.	Ped.	Ortho.	Med.	Surg. 1
Fifth	2 months..	Surg. 1	Surg. 2	Obs.	Ped.	Ortho.	Med.
Sixth	2 months..	Med.	Surg. 1	Surg. 2	Obs.	Ped.	

PLAN 4

A general hospital of 260 beds, of which ninety-one are surgical, forty-five medical, thirty pediatric, twenty-six obstetric, and sixty-eight mixed. There are eight interns, four of whom enter July 1 of each year for an internship of two years. There are eight services of three months each, as follows:

1. Laboratory.
2. Gynecology and Genito-Urinary.
3. Women's Surgical, Children's Surgical, Orthopedic and Eye.
4. Women's Medical and Children's Medical.
5. Men's Medical and Medical Chiefs Off Duty.
6. Men's Surgical and Surgical Chiefs Off Duty.
7. Receiving Ward, Ambulance and Dispensary.
8. Maternity and Nose and Throat.

PLAN 5

A general hospital of 300 beds, of which 100 are surgical 150 medical, fifteen obstetric, and thirty-five pediatric. There are nine interns, each intern changing services every three months, going through the services in the following order:

1. Eye, Ear, Nose and Throat. Anesthetics.
2. Pediatrics, Neurology, Psychiatry, Poisons, Tuberculosis, Contagious Diseases.
3. Junior Medicine; one-half time in Laboratory, Genito-Urinary, Proctology; Relief on Obstetrics.
4. Senior Medicine, including supervision of Medical Service and Obstetrics.
5. Junior Surgery: Emergencies, Gynecology. Second Assistant at all operations. Relieves Senior Surgery.
6. Senior Surgery: First Assistant at all operations. Minor and Major Surgery under staff supervision.

PLAN 6

A city general hospital has 500 beds, of which approximately 200 are surgical, 250 medical, and fifty obstetrical. There are altogether twenty-one interns, three of whom enter every quarter and remain for twenty-one months. Each group begins in the department of medicine and progresses every three months through the following services:

1. Medicine.
2. Surgery.
3. Ambulance and Emergency.
4. Assistant House Surgeon.
5. House Physician.
6. House Surgeon.
7. Specialties, including Genito-Urinary, Gynecological, Obstetrical and Eye, Ear, Nose and Throat.

* Extracted from the report of the Hospital Committee of the American Hospital Association.

3. HOSPITALS APPROVED FOR ADVANCED INTERNSHIPS OR RESIDENCIES

During the last four years, along with the study of hospitals for the training of interns, investigations have been made, also, of hospitals considered in position to furnish satisfactory residencies (higher internships) leading to an increased knowledge and skill in the various specialties. By 1926 about fifty such hospitals had been approved, but during the last year under increased efforts the list was increased to 270. These are shown in the list published on page 829. These 270 hospitals have a capacity of 155,962 beds and provide 1,699 residencies in the various special fields. It is interesting to note that the largest number of residencies at present is found in neuropsychiatry—owing to the fact probably that more of these hospitals have been investigated for residencies, as the type of patients cared for prevents their obtaining interns. Surgery provides the next largest number of residencies, 249, followed by 200 residencies in internal medicine, 157 in tuberculosis, 133 in pediatrics and 105 in obstetrics and gynecology. These figures do not indicate the extent to which various specialties are attractive. It is believed that, following surgery and internal medicine, in recent years ear, nose and throat and ophthalmology are the specialties toward which many general practitioners have been attracted.

As this is the first time such statistics have been presented, comparisons cannot be made. In subsequent presentations, however, the trend toward various specialties can be better observed.

Of the 270 hospitals providing residencies, twenty-one have over 2,000 beds; thirty-one have between 1,000 and 2,000 beds; thirty have between 500 and 1,000 beds, while 188 have less than 500 beds. It will be noted that practically all of the hospitals having less than fifty beds and many of those having between fifty and seventy beds are special hospitals in which residencies in a single specialty are offered.

The salaries offered by the various approved hospitals are also shown in the table and range from $25 to $100 a month. A few, however, pay as high as $150 or $160 a month. In many of these hospitals the physician, if his services are satisfactory, has the opportunity of continuing his residency for one or two years longer with an increasing stipend. The great value of this type of training is that the recent graduate is assisting or working with a skilled surgeon, by whom his own work is supervised, and thereby secures an increased knowledge and skill in his chosen specialty.

But the benefits are not alone with the resident. The hospital itself secures a physician who is qualified to assume a larger responsibility in that he has already completed his internship; he can be secured at a salary slightly in advance of that paid to interns and, if desired, he can usually be retained for two or more years with slight increases in the stipend. No general hospital is approved for residencies in the specialties unless it is also approved for the training of interns. Special hospitals will be approved if otherwise satisfactory on condition that the residents shall have already completed internships in general hospitals.

The tremendous expansion in the knowledge regarding the cause, cure and prevention of diseases has increased the tendency among recent graduates, after securing their general internship, to proceed at once to secure additional training toward some specialty. There should be no particular anxiety on this account. The danger is not from an increased specialization but from those who pose as specialists without having secured the essential advanced training. Possibly the best place to secure the additional knowledge and skill needed in the specialty is through the two or more years of residency which a physician could spend under the supervision of a physician or surgeon who has himself developed skill in that specialty.

Hospital Residencies and Graduate Courses in Medicine

The Council desires to cooperate with hospitals providing residencies in specialties and with graduate medical schools in the establishing of greater opportunities whereby physicians can secure additional training by which they can increase their knowledge and develop skill either for general practice or within the narrower bounds of some specialty. Such cooperation has been most heartily granted in the work thus far, by which the Council has been enabled to present this week the lists of hospitals approved for residencies and the approved graduate medical schools.

Any general hospital which is already approved for the training of interns is eligible for approval also for residencies, whether or not such residencies are filled by the hospital's own interns or by those who have completed internships elsewhere. Of course, the intern training is essential for any one who is to assume the higher responsibility required of residents.

In regard to graduate medical schools, any course of instruction which will improve a physician's knowledge or skill will be of service both to himself and to his patients. It is believed, however, that much better instruction will be furnished if short courses are arranged in a graded series whereby the student can progress from one to another and know that he is continually progressing in his work. The Council, indeed, is withholding its approval from certain short courses, which, taken alone, may be utilized as short cuts into specialization by those who are unfitted either by knowedge or by developed skill for the practice of that specialty. Short courses, especially those in the surgical specialties, should be arranged in a graded series or should be given in composite courses including review courses in the fundamental sciences and diagnostic courses. If possible, opportunities should be provided later whereby the student can learn to apply his knowledge by acting as second assistant and later as first assistant to a teacher who is himself skilled in the particular specialty.

Where courses leading to specialization in any subject are properly graded and where the graduate school carefully investigates the previous training of the individual physician before assigning him to courses of instruction, the danger of using short or limited courses as short cuts to the practice of a specialty will be properly safeguarded.

Investigations during the past few years have revealed the deplorable lack of opportunities whereby physicians who graduated ten or more years ago may secure satisfactory courses whereby they are enabled to secure a knowledge in respect to the later and better methods of diagnosis and treatment. It is hoped, therefore, that more such courses can be established whereby the great abundance of splendid clinical material in the hospitals of this country can be better utilized for educational purposes.

HOSPITALS APPROVED FOR RESIDENCIES IN SPECIALTIES

By the Council on Medical Education and Hospitals of the American Medical Association, 535 North Dearborn Street, Chicago

February 15, 1927

The following hospitals containing 155,962 beds are considered in position to furnish acceptable residencies for graduate medical students in the several specialties designated. Two other lists of approved hospitals are published as follows: (1) approved graduate medical schools and hospitals offering approved courses for graduate medical study; and (2) hospitals approved for intern training. These may be obtained for ten cents each.

HOSPITALS 270 **RESIDENCIES 1,699**

Name	Location	Stipend per Month	Beds	Anesthesia	Dermatology	Gynecology and Obstetrics	Medicine	Neuropsychiatry	Ophthalmology	Otolaryngology	Pathology	Pediatrics	Radiology	Surgery	Tuberculosis	Urology	Other	General Practice	Totals
ALABAMA																			
St. Vincent's Hospital	Birmingham	$125-$150	125	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Tennessee Coal, Iron and R. R. Employees' Hospital	Fairfield	Varies	310	1	...	1	1	...	1[a]	...	...	...	...	1	...	1	...	...	6
CALIFORNIA																			
Agnew State Hospital	Agnew	$170-$270	1,850	...	...	...	...	6	...	...	1	...	1	1	...	...	...	...	9
Arroyo Sanatorium	Livermore	.....	180	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	3
Livermore Sanitarium	Livermore	$10	85	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
Children's Hospital	Los Angeles	$75	100	...	...	...	...	...	...	...	...	6	...	...	...	...	...	...	6
Golden State Hospital	Los Angeles	$300-$500	85	...	...	...	...	...	...	...	...	...	1	5	...	...	...	...	6
Los Angeles General Hospital	Los Angeles	$30-$75	1,219	1	...	...	...	2	1	1	2	...	2	1	...	1	1[b]	...	12
White Memorial Hospital	Los Angeles	$140-$158	100	...	...	1	2	...	...	...	2	...	2	2	...	...	...	...	6
The Pottenger Sanatorium	Monrovia	$50 & up	135	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2
Baby Hospital	Oakland	$100	35	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
Southern California State Hospital	Patton	.....	2,638	...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	9
Mater Misericordiae Hospital	Sacramento	No	150	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	2
Children's Hospital	San Francisco	$50-$100	100	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2
Mount Zion Hospital	San Francisco	$100	130	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
San Francisco Hospital	San Francisco	$50-$125	1,075	...	...	1	3	...	...	1	...	...	...	3	...	...	1[c]	1	10
Lane Hospital of Stanford University	San Francisco	$25-$75	180	...	1	2	2	1	1	1	...	2	1	2	...	1	...	...	14
Shriners' Hosp. for Crippled Children	San Francisco	$50	50	...	...	...	...	...	...	...	...	...	...	...	...	...	1[d]	...	1
St. Francis Hospital	San Francisco	$50-$100	325	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	7
Mary's Help Hospital	San Francisco	$75	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
St. Luke's Hospital	San Francisco	$100	200	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
St. Mary's Hospital	San Francisco	$150	210	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
University Hospital	San Francisco	$60-$75	283	...	...	2	3	...	...	...	...	1	...	4	...	...	...	...	10
St. Helena Sanitarium and Hospital	Sanitarium	$150	140	...	...	...	2	...	...	...	1	...	...	2	...	...	...	...	5
COLORADO																			
Colorado General Hospital	Denver	$50	260	...	...	...	1	...	1	1	...	...	...	1	...	...	...	...	4
Colorado Psychopathic Hospital	Denver	$50-$150	80	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
National Jewish Hospital	Denver	$125-$225	237	...	...	...	...	...	...	...	1	...	...	...	4	...	...	...	5
St. Luke's Hospital	Denver	$15	224	...	...	1	1	...	1[e]	...	1	1	1	2	...	1	...	...	9
Jewish Consumptives' Relief Society	Sanatorium	$100-$125	300	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	6
CONNECTICUT																			
Cedarcrest Sanatorium	Hartford	$150	200	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2
Hartford Retreat	Hartford	$100	200	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
Meriden State T. B. Sanatorium	Meridan	$150	225	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2
New Haven Hospital	New Haven	$10	410	...	...	2	4	...	...	...	1	2	1	5	...	...	...	...	15
Gaylord Farm Sanitarium	Wallingford	Varies	130	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	3
DISTRICT OF COLUMBIA																			
Children's Hospital	Washington	$10	150	...	...	...	...	...	...	...	...	7	...	...	...	...	1[f]	...	8
Columbia Hospital for Women	Washington	.....	126	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	4
St. Elizabeth's Hospital (a)	Washington	$155 (a)	4,418	...	...	...	2	6	...	...	...	...	...	1	...	...	...	...	9
Water Reed General Hospital	Washington	Varies	1,500	1	1	1	12	5	2	3	3	1	1	10	1	1	7[g]	2	51
FLORIDA																			
Florida Sanitarium and Hospital	Orlando	.....	135	...	...	...	...	...	...	...	...	...	...	...	...	...	1[h]	...	1
GEORGIA																			
University Hospital	Augusta	$50-$125	261	...	...	...	3	...	...	1[i]	1	...	...	3	...	...	...	...	8
U. S. Veteran's Hospital No. 62	Augusta	$100	574	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Wesley Memorial Hosptal	Emory University	$200	170	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
ILLINOIS																			
Chicago Lying-In Hospital and Disp.	Chicago	$75	140	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Chicago Municipal Tuberculosis Sanit.	Chicago	.....	950	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	4
Chicago State Hospital	Chicago	$150-$185	2,988	...	...	...	...	12	...	...	...	...	...	...	...	...	...	...	12
Children's Memorial Hospital	Chicago	$50	250	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2
Cook County Hospital	Chicago	No	2,500	...	2	1	3	...	4[j]	...	...	1	...	...	...	...	1[k]	...	12
Durand Hospital	Chicago	$100-$150	60	...	...	...	...	...	...	...	...	...	...	...	...	...	1[l]	...	1
Illinois Eye and Ear Infirmary	Chicago	No	135	...	...	...	...	...	...	8[m]	...	...	...	...	...	...	...	...	8
Michael Reese Hospital	Chicago	$100	480	...	...	...	1	...	...	...	...	1	...	...	...	...	1[n]	...	3
Presbyterian Hospital	Chicago	$50	425	...	...	...	1	...	...	...	...	1	...	2	...	...	...	...	4
Research and Educational Hospital	Chicago	$50	150	...	...	1	1	1	1	1	...	1	...	2	...	...	...	...	8
St. Elizabeth's Hospital	Chicago	$25	225	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
St. Luke's Hospital	Chicago	$30	675	...	...	...	...	...	1[o]	...	...	...	...	...	...	...	1[p]	...	2
Watertown State Hospital	East Moline	$150	1,900	...	...	...	5	5	...	...	...	...	...	...	1	...	...	...	11
Lincoln State School and Colony	Lincoln	$150-$185	2,568	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
Cook County Infirmary	Oak Forest	$188-$220	4,000	...	...	...	1	1	1	1	1	...	2	1	7	1	1[q]	...	17
Peoria State Hospital	Peoria	.....	2,700	...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	7
INDIANA																			
Indianapolis City Hospital	Indianapolis	$41.67	600	...	...	1	1	...	1	1	...	1	...	1	...	...	1[r]	...	7
James Whitcomb Riley Hospital	Indianapolis	$83.33-$100	150	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	2
Robert W. Long Hospital	Indianapolis	$83.33-$100	104	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2
Indiana State Sanatorium	Rockville	.....	184	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
KANSAS																			
Osawatomie State Hospital	Osawatomie	$125-$150	1,400	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	6
KENTUCKY																			
Louisville City Hospital	Louisville	$50-$125	400	1	...	...	2	...	...	...	1	1	...	2	...	1	...	...	8
LOUISIANA																			
U. S. Marine Hospital No. 66	Carville	$50	500	...	...	...	...	...	...	...	...	...	...	...	...	...	3[s]	...	3
East Louisiana State Hospital	Jackson	$25	60	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
Charity Hospital	New Orleans	$100-$300	1,554	...	1	...	2	...	...	...	2	...	1	4	...	...	...	...	10
Shriners' Hosp. for Crippled Children	Shreveport	.....	50	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1

Hospitals Approved for Residencies in Specialties—Continued

Name	Location	Stipend per Month	Beds	Anesthesia	Dermatology	Gynecology and Obstetrics	Medicine	Neuropsychiatry	Ophthalmology	Otolaryngology	Pathology	Pediatrics	Radiology	Surgery	Tuberculosis	Urology	Other	General Practice	Totals
MARYLAND																			
Johns Hopkins Hospital	Baltimore	$11.66-$58.33	723	...	...	8	...	6	...	1	3	3	...	7	...	3	1[1]	7	39
St. Agnes' Hospital	Baltimore	.....	205	...	...	...	...	...	...	...	...	...	...	2	...	...	...	1	3
Union Memorial Hospital	Baltimore	$12.50-$40.00	149	...	...	...	2	...	...	...	...	1	...	4	...	...	...	...	7
West Baltimore General Hospital	Baltimore	$100	165	...	...	1	1	...	...	...	...	...	...	2	...	...	...	...	4
Jewish Home for Consumptives	Reisterstown	$100	60	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Springfield State Hospital	Sykesville	$83.33-$300	1,850	...	...	...	...	8	...	...	...	...	...	...	...	...	...	...	8
MASSACHUSETTS																			
Boston City Hospitals (5)	Boston	.....	1,224	1	...	...	...	...	...	...	...	1	...	1	...	...	7[8]	...	10
Boston Psychopathic Hospital	Boston	$75-$165	110	...	...	...	...	8	...	...	...	...	...	...	...	...	...	...	8
Boston Sanatorium	Boston	$100-$291	422	...	...	...	...	...	...	...	...	...	...	1	6	...	...	...	7
Boston State Hospital	Boston	$120-$195	2,120	...	...	...	...	11	...	...	...	...	...	...	...	...	...	...	11
Children's Hospital	Boston	No	277	...	...	...	...	...	...	...	2	8	...	3	...	...	4[1]	...	17
Collis P. Huntington Memorial Hosp.	Boston	$50	25	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2
Massachusetts Eye and Ear Infirmary	Boston	No	209	...	...	...	...	...	6	6	...	...	...	...	...	...	...	...	12
Massachusetts General Hospital	Boston	$33.33	425	...	...	...	2	1	...	...	1	1	1	2	...	1	...	...	9
Massachusetts Homeopathic Hospital	Boston	$100-$250	534	...	...	1	1	...	...	...	1	...	...	1	...	...	1[2]	...	5
Peter Bent Brigham Hospital	Boston	$11.66-$83.33	223	...	...	...	6	...	...	...	1	...	1	5	...	...	...	...	13
New England Sanitarium and Hospital	Melrose	.....	150	...	...	...	...	...	...	...	...	...	...	...	...	...	1[4]	4	5
Sassaquin Sanatorium	New Bedford	.....	116	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Grafton State Hospital	North Grafton	.....	1,851	...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	7
Northampton State Hospital	Northampton	$50	1,230	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
Westfield State Sanatorium	Westfield	$120-$180	310	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	3
Belmont Hospital	Worcester	$133.33	180	...	...	...	...	...	...	...	...	...	...	...	1	...	1[2]	..	2
Memorial Hospital	Worcester	$100	200	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
Worcester City Hospital	Worcester	No	400	...	...	2	2	1	1[8]	...	...	...	...	4	...	1	2[1]	...	13
Wrentham State School	Wrentham	.....	1,500	...	...	...	...	1[9]	...	...	...	...	...	...	...	...	...	...	1
MICHIGAN																			
University Hospital	Ann Arbor	$70	1,100	...	1	3	8	1	1	2	1	4	3	14	...	...	...	...	38
American Legion Hospital	Battle Creek	$166.63	350	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2
Battle Creek Sanitarium	Battle Creek	.....	1,000	...	...	...	1	1	1[8]	...	...	...	...	1	...	...	...	...	4
Children's Hospital of Michigan	Detroit	.....	250	...	...	...	...	...	1[8]	...	...	9	...	1	...	...	...	...	11
Detroit Tuberculosis Sanatorium	Detroit	No	145	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Grace Hospital	Detroit	$100	362	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	3
Harper Hospital	Detroit	$50-$100	400	...	...	2	1	...	2[8]	...	1	...	...	3	...	...	...	...	9
Herman Kiefer Hospital	Detroit	$125.$166.66	700	...	...	2	5	...	...	...	1	...	1	...	4	...	...	...	13
Jefferson Clinic and Diag. Hospital	Detroit	$75	50	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	2
Receiving Hospital	Detroit	$125-$262.50	365	...	...	1	2	1	1[8]	...	1	...	1	2	...	1	3[11]	...	13
Woman's Hospital and Infants' Home	Detroit	$150	105	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Kalamazoo State Hospital	Kalamazoo	$150-$416	2,419	...	...	...	...	8	...	...	...	...	...	...	...	...	...	...	8
Newberry State Hospital	Newberry	$150	1,160	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
Spring Hills Sanatorium	Northville	$125-$150	400	...	...	...	...	...	...	...	1	...	...	...	7	...	...	...	8
Traverse City State Hospital	Traverse City	$150-$291.66	2,034	...	...	...	...	8	...	...	...	...	...	...	...	...	...	...	8
Michigan Farm Colony for Epileptics	Wahyamega	$150-$250	900	...	...	...	...	3[10]	...	...	...	...	...	...	...	...	...	...	3
MINNESOTA																			
Minneapolis General Hospital	Minneapolis	No	698	...	1[‡]	2	2	1	1	...	1	1	...	2	...	...	...	...	11
University Hospital	Minneapolis	$63.66-$83.33	202	...	...	4	4	1	2[8]	...	3	1	2	3	...	...	1[12]	...	21
Nopeming Sanatorium	Nopeming	.....	224	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Glen Lake Sanatorium	Oak Terrace	$100	655	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	5
Ancker Hospital	St. Paul	$100	850	...	...	...	1	...	...	...	...	...	...	1	...	1	1[2]	1	5
Northern Pacific Beneficial Hospital	St. Paul	$25	154	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2
State Hospital for Crippled Children	St. Paul	$25	250	...	...	...	...	...	...	...	...	1	...	4	...	...	...	...	5
St. Peter State Hospital	St. Peter	$150-$200	1,600	...	...	...	...	5	...	...	...	...	...	...	...	...	...	...	5
MISSISSIPPI																			
Mississippi State Charity Hospital	Vicksburg	$25-$75	110	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2
MISSOURI																			
State Hospital No. 4	Farmington	$150	900	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
Barnes Hospital	St. Louis	$21-$83.33	282	...	...	3	2	1	...	1	1	...	1	5	...	1	...	...	15
Isolation Hospital	St. Louis	$175	200	...	...	...	...	...	...	...	...	...	...	...	...	...	1[13]	...	1
Missouri Baptist Sanitarium	St. Louis	$25	360	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
City Sanitarium	St. Louis	.....	2,900	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	3
Shriners' Hosp. for Crippled Children	St. Louis	$200	107	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
St. Louis Children's Hospital	St. Louis	$25-$10	143	...	...	...	...	...	1	...	8	...	...	...	...	...	...	...	9
St. Louis City Hospital (c)	St. Louis	$145	700	...	...	1	2	...	...	...	...	...	...	2	...	...	...	...	5
St. Louis City Hospital No. 2 (col.)	St. Louis	$145	275	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2
St. Luke's Hospital	St. Louis	$25	200	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
MONTANA																			
Montana State Hospital	Warmsprings	$150-$200	1,550	...	...	...	...	4	...	...	1	...	...	1	...	...	...	...	6
NEBRASKA																			
Norfolk State Hospital	Norfolk	$150	850	...	...	...	1	3	...	...	1	...	...	...	...	...	...	...	5
NEW HAMPSHIRE																			
New Hampshire State Sanitarium for Tuberculosis	Glencliff	$125	110	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2
NEW JERSEY																			
Children's Seashore House	Altantic City	$75	400	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
New Jersey Sanatorium for T. B.	Glen Gardner	.....	300	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	4
Jersey City Hospital	Jersey City	$100-$250	600	...	...	2	1	...	...	...	1[†]	...	...	1	...	1	...	...	6
Physiatric Institute	Morristown	$75-$100	150	...	...	...	8[14]	...	...	...	1	...	...	...	...	...	...	...	9
Village for Epileptics	Skillman	$125-$200	1,000	...	...	...	...	6[10]	...	...	...	...	...	...	...	...	...	...	6
Somerset Hospital	Somerville	.....	86	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
NEW YORK																			
Jewish Hospital of Brooklyn	Brooklyn	No	265	...	...	...	...	...	...	...	...	2	2	...	...	...	...	...	4
Long Island College Hospital	Brooklyn	$50	470	...	...	1	1	...	1[8]	...	1	1	1	1	...	1	...	...	8
Buffalo City Hospital (b)	Buffalo	$125-$150	863	...	2	2	5	1	1	2	1	2	1	3	1	2	...	...	23
Buffalo General Hospital	Buffalo	No	400	...	8	4	12	...	...	4[†]	8	4	...	16	...	...	...	...	56
Children's Hospital	Buffalo	.....	135	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
Clifton Springs Sanitarium and Clinic	Clifton	$125	375	...	...	...	1	1	1	1	1	1	1	1	...	1	...	...	9
Workmen's Circle Sanatorium	Liberty	$100	100	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Loomis Sanitarium	Loomis	Varies	225	...	...	...	...	...	...	...	...	...	...	...	7	...	...	...	7
Metropolitan Life Insur. Co. Sanit.	Mount McGregor	$150-$416.63	300	...	...	...	2	...	...	...	1	...	1	...	3	...	...	...	7
Babies Hospital	New York	$75	80	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	5
Bellevue and Allied Hospitals	New York	$83.33-$160	1,680	4	...	1	2	8	1	1	1	1	...	2	4	1	...	...	26
Beth Israel Hospital	New York	$100	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Central Neurological Hospital	New York	$50-$110	500	...	...	...	1	6	...	...	...	...	...	1	...	...	...	...	8
Fifth Avenue Hospital	New York	$50	295	...	...	...	1	...	...	...	...	1	...	1	...	...	...	...	3
Harlem Eye and Ear Hospital	New York	No	45	...	...	...	...	...	3[8]	...	...	...	...	...	...	...	...	...	3
Herman Knapp Memorial Eye Hospital	New York	No	50	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2

Hospitals Approved for Residencies in Specialties—Continued

Name	Location	Stipend per Month	Beds	Anesthesia	Dermatology	Gynecology and Obstetrics	Medicine	Neuropsychiatry	Ophthalmology	Otolaryngology	Pathology	Pediatrics	Radiology	Surgery	Tuberculosis	Urology	Other	General Practice	Totals
NEW YORK—Continued																			
Hospital for Joint Diseases	New York	.....	277	...	...	...	...	...	...	...	...	...	...	...	...	...	10[1]	...	10
Jewish Maternity Hospital	New York	No	52	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	3
Lenox Hill Hospital	New York	No	345	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	3
Manhattan Eye, Ear & Throat Hosp.	New York	No	200	...	...	...	...	...	5	7	...	...	...	...	...	...	...	...	12
Manhattan Maternity and Dispensary	New York	$100	40	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Memorial Hospital for Treatment of Cancer and Allied Diseases	New York	$100-$125	104	...	...	...	...	...	...	...	...	...	...	...	...	...	1[13]	...	1
Metropolitan Hospital	New York	$110	1,600	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2
Montefiore Hosp. for Chronic Diseases	New York	$50-$100	580	...	...	...	2	2	...	...	...	...	1	2	2	...	...	...	9
Mount Sinai Hospital	New York	$50-$150	650	...	...	2	1	2	2*	...	...	2	6	4	...	...	...	...	19
Neurological Institute of New York	New York	$58-$83	85	...	...	...	...	3	...	...	...	...	...	1	...	...	...	...	4
New York City Cancer Institute	New York	$109.16-$208.33	200	...	...	...	...	...	...	...	...	...	...	...	...	...	6[13]	...	6
New York Eye and Ear Infirmary	New York	No	175	...	...	...	...	...	6	6	...	...	...	...	...	...	...	...	12
New York Hospital	New York	$100	304	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	2
New York Nursery and Child's Hosp.	New York	$50-$125	268	...	...	5	...	...	...	...	...	6	...	...	...	...	...	...	11
New York Ophthalmic Hospital	New York	$50	47	...	...	...	...	...	...	2†	...	...	...	...	...	...	...	...	2
New York Orthopedic Disp. & Hosp.	New York	$25-$100	135	...	...	...	...	...	...	...	...	...	...	...	...	...	6[1]	...	6
New York Postgraduate Medical School and Hospital	New York	$100	417	...	...	...	1	...	1*	...	1	1	...	1	...	...	2[2]	...	7
New York Skin and Cancer Hospital	New York	$100	100	1	2	...	...	...	...	...	...	...	...	2	...	...	2[16]	...	7
New York Society for the Relief of the Ruptured and Crippled	New York	.....	236	...	...	...	...	...	...	...	...	...	...	...	...	...	8[1]	...	8
Presbyterian Hospital	New York	$41.66-$125	256	...	...	...	2	...	...	...	1	2	1	...	...	...	1[2]	...	7
Sloane Hospital for Women	New York	$50-$100	102	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	3
St. Luke's Hospital	New York	No	417	...	...	...	6	...	...	3†	4	...	...	6	...	...	...	...	19
St. Mary's Free Hospital for Children	New York	.....	140	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2
U. S. Veteran's Hospital, No. 81	New York	.....	850	...	...	...	...	23	1*	...	...	...	...	...	...	...	2[2]	...	26
Willard Parker Hospital	New York	$116	625	...	...	...	...	...	...	2	1	...	...	...	...	...	4[2]	...	7
J. N. Adam Memorial Hospital	Perrysburg	$208.25-$291.66	550	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	6
Samuel W. Bowne Memorial Hospital	Poughkeepsie	$125	130	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2
New York State Hospital for Incipient Tuberculosis	Ray Brook	No	300	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Monroe County T. B. Sanatorium	Rochester	$150-$250	284	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	5
Rochester General Hospital	Rochester	$50-$150	309	...	...	...	2	...	...	...	1	...	...	4	...	...	...	...	7
Strong Memorial Hospital	Rochester	$41.66-$83.33	246	...	...	2	3	...	...	...	1	3	1	4	...	...	...	...	14
Rome State School	Rome	.....	2,400	...	...	...	...	6[9]	...	...	...	...	...	...	...	...	...	...	6
Hospital of the Good Shepherd	Syracuse	$83.33	257	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2
Letchworth Village	Thiells	.....	2,000	...	...	...	...	4[9]	...	...	...	...	...	...	...	...	...	...	4
New York State Orthopedic Hospital	W. Haverstraw	$125-$166.66	176	...	...	...	...	...	...	...	...	...	...	...	...	...	3[1]	...	3
Bloomingdale Hospital for Children	White Plains	.....	350	...	...	...	...	11	...	...	1	...	1	...	...	...	1[15]	...	14
NORTH CAROLINA																			
North Carolina Sanat. for Tuberculosis	Sanatorium	$150	350	...	...	...	1	...	...	...	...	...	1	...	5	...	...	...	7
Davis Hospital	Statesville	.....	50	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
NORTH DAKOTA																			
North Dakota State Hosp. for Insane	Jamestown	$150-$208	1,400	...	...	...	...	5	...	...	...	...	1	...	...	...	...	...	6
OHIO																			
Children's Hosp. & Mary Day Nursery	Akron	$100	65	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
Cincinnati General Hospital	Cincinnati	Varies	800	...	...	1	5	1	2*	...	2	4	...	9	2	1	...	...	27
City Hospital	Cleveland	$25-$75	1,100	...	2	...	3	1	...	...	2	1	...	4§	1	1	3[2]	...	18
Cleveland State Hospital	Cleveland	$125-$216.66	2,100	...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	7
Lakeside Hospital	Cleveland	$25-$41.66	252	...	1	2	3	...	...	2	3	...	...	6	...	...	1[16]	...	18
Mt. Sinai Hospital	Cleveland	$75-$125	260	...	...	1	1	...	...	...	1	1	...	2	...	...	...	...	6
St. Ann's Infant Asylum and Hospital	Cleveland	$100	322	...	...	2	...	...	...	...	...	1	...	...	...	...	...	...	3
St. Vincent's Charity Hospital	Cleveland	$50-$100	300	...	...	...	2	...	...	...	1	...	...	2	...	...	...	...	5
Columbus State Hospital	Columbus	$125-$216.66	2,150	...	...	...	...	6	...	...	...	...	...	...	...	...	...	...	6
Dayton State Hospital	Dayton	$125	1,200	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
Massillon State Hospital	Massillon	.....	2,282	...	...	...	...	5	...	...	1	...	...	1	...	...	...	...	7
Toledo State Hospital	Toledo	$125	2,075	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
OKLAHOMA																			
University Hospital	Oklahoma City	$25	286	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	2
OREGON																			
Shriners' Hosp. for Crippled Children	Portland	$75	50	...	...	...	...	...	...	...	...	...	...	...	...	...	1[1]	...	1
PENNSYLANIA																			
Allentown State Hospital	Allentown	$130 & up	1,350	...	...	...	...	9	...	...	...	...	...	...	...	...	...	...	9
Devitt's Camp for Tuberculosis	Allenwood	.....	120	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2
Pennsylvania State Sanatorium for Tuberculosis	Cresson	$125 & up	700	...	...	...	...	...	...	...	...	...	...	...	5	...	...	...	5
Hamburg State Sanatorium No. 3	Hamburg	$125-$208.33	450	...	...	...	...	...	1	...	...	...	...	...	3	...	...	...	4
Harrisburg State Hospital	Harisburg	$125	1,430	...	...	...	...	7	...	...	...	...	...	...	...	...	...	...	7
Norristown State Hospital	Norristown	$100-$416.66	3,000	...	...	...	...	10	...	...	...	...	...	...	...	...	...	...	10
Pennhurst State School	Pennhurst	$61-$116	1,200	...	...	...	...	1[9]	...	...	...	...	...	...	...	...	...	...	1
Children's Homeopathic Hospital	Philadelphia	$50-$100	165	...	...	2	...	...	...	...	...	2	...	...	...	...	...	...	4
Children's Hospital	Philadelphia	No	102	...	...	...	...	...	...	...	...	6	...	...	...	...	...	...	6
Jewish Maternity Hospital	Philadelphia	$100	46	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
Medico-Chirurgical and Polyclinic Hospital (d)	Philadelphia	No	382	...	...	...	1	...	...	...	...	...	...	2	...	1	...	...	4
Methodist Episcopal Hospital	Philadelphia	$150	300	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Pennsylvania Hospital	Philadelphia	$25	350	...	...	...	...	10	...	...	...	...	...	...	...	...	...	...	10
Philadelphia General Hospital	Philadelphia	$100	2,000	...	...	1	1	...	...	...	1	1	...	1	...	...	...	...	5
Presbyterian Hospital	Philadelphia	.....	322	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Philadelphia Lying-In Charity Hosp.	Philadelphia	.....	65	...	...	2	...	...	...	...	...	3	...	...	...	...	...	...	5
Philadelphia Orthopedic Hospital	Philadelphia	$50-$100	136	...	...	...	2**	...	...	...	...	...	...	1††	...	...	...	...	3
St. Christopher's Hospital for Children	Philadelphia	$100	62	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2
St. Luke's Homeopathic Hospital	Philadelphia	$100	54	2	3	2	3	3	3	3	2	2	2	3	3	3	...	...	34
U. S. Veterans Hospital No. 49	Philadelphia	Varies	420	1	...	...	1	8	1	...	1	...	1	1	...	...	1[2]	...	15
Wills Hospital	Philadelphia	No	112	...	...	...	...	...	4	...	...	...	...	...	...	...	...	...	4
Allegheny General Hospital	Pittsburgh	$100	405	...	...	...	1	...	...	...	2	...	...	1	...	...	...	...	4
Children's Hospital	Pittsburgh	$50-$100	200	1	...	...	...	...	...	...	...	1	1	1	...	...	...	...	4
Elizabeth Steel Magee Hospital	Pittsburgh	$41.67	245	...	...	3	...	...	...	...	1	...	...	...	...	...	...	...	4
Eye and Ear Hospital	Pittsburgh	No	55	1	...	...	...	...	2	2	...	...	...	...	...	...	...	...	5
St. Francis Hospital	Pittsburgh	$50-$375	600	...	...	1	1	3	...	...	1	...	1	1	...	...	1[17]	...	9
Tuberculosis League Hospital	Pittsburgh	$200-$300	120	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	3
Polk State School	Polk	$50	2,046	...	...	...	2	6	...	...	...	...	...	...	...	1	...	...	9
Scranton State Hospital	Scranton	$120-$150	188	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2
Pennsylvania State Sanatorium No. 1	South Mountain	$50-$100	825	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	3
Warren State Hospital	Warren	$130	1,700	...	...	...	...	7	...	...	1	...	...	...	...	...	...	...	8

Hospitals Approved for Residencies in Specialties—Continued

Name	Location	Stipend per Month	Beds	Anesthesia	Dermatology	Gynecology and Obstetrics	Medicine	Neuropsychiatry	Ophthalmology	Otolaryngology	Pathology	Pediatrics	Radiology	Surgery	Tuberculosis	Urology	Other	General Practice	Totals
RHODE ISLAND																			
State Hospital for Mental Diseases	Cranston	$150	1,709	...	...	...	...	10	...	...	...	...	...	...	...	...	...	...	10
State Infirmary	Howard	.....	682	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	4
Providence City Hospital	Providence	$25-$50	190	...	...	...	...	...	...	...	...	...	...	...	...	...	[23]	...	2
Rhode Island Hospital	Providence	$150	600	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Rhode Island State Sanatorium	Wallum Lake	$125-$237.50	370	...	...	...	...	...	...	...	...	...	...	...	4	...	...	...	4
SOUTH DAKOTA																			
Yankton State Hospital	Yankton	$150	1,350	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
TENNESSEE																			
Baptist Memorial Hospital	Memphis	$175	350	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Davidson County T. B. Hospital	Nashville	$150-$200	178	...	...	...	...	...	...	...	...	...	...	...	2	...	...	..	2
Vanderbilt University Hospital	Nashville	.....	216	...	...	1	1	...	...	...	1	1	...	1	...	...	...	...	5
TEXAS																			
Baylor University Hospital	Dallas	$100	414	...	...	1	1	...	...	...	...	...	...	1	...	...	...	..	3
Parkland Hospital	Dallas	.....	250	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2
Texas Scottish Rite Hospital for Crippled Children	Dallas	$100	50	...	...	...	...	...	...	...	...	...	...	...	...	...	[11]	...	1
The Homan Sanatorium	El Paso	Varies	110	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	3
Wm. Beaumont General Hospital	El Paso	Varies	403	1	...	1	4	1	[1]*	...	2	...	1	3	2	1	[13]	...	18
State Tuberculosis Sanatorium	Sanatorium	.....	400	...	...	...	...	...	...	...	1	...	...	...	5	...	...	...	6
Wichita Falls State Hospital (a)	Wichita Falls	$50	900	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
VIRGINIA																			
University of Virginia Hospital	Charlottesville	No	260	...	...	1	1	...	1	1	...	1	1	2	...	1	...	...	9
St. Elizabeth's Hospital	Richmond	.....	50	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1
WASHINGTON																			
Western State Hospital	Ft. Steilacoom	.....	1,550	...	...	...	...	4	...	...	...	...	...	...	...	...	...	...	4
Longview Memorial Hospital, Inc.	Longview	$100	80	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Northern State Hospital	Sedro Woolley	Varies	1,200	...	...	...	3	1	...	...	...	...	...	...	...	...	...	...	4
WEST VIRGINIA																			
Fairmont Hospital No. 3	Fairmont	.....	73	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	3
Chesapeake & Ohio R. R. Hospital	Huntington	$50	69	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2
WISCONSIN																			
State of Wisconsin General Hospital	Madison	$25-$150	450	...	...	1	1	1	1*	...	1	...	...	1	...	...	...	...	6
Johnston Emergency Hospital	Milwaukee	$175	35	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	3
Milwaukee Children's Hospital	Milwaukee	$150	145	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
Misericordia Hospital	Milwaukee	No	75	1	...	4	...	...	...	...	1	2	...	...	...	...	...	...	8
South View Hospital	Milwaukee	.....	200	...	...	...	...	...	...	...	...	...	...	...	...	...	[12]	...	1
Wisconsin State Sanatorium	Statesan	$135-$150	200	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2
Milwaukee County Hospital	Wauwatosa	$100	308	...	...	...	2	...	...	...	...	...	...	1	...	...	...	...	3
Milwaukee Sanitarium	Wauwatosa	$50	110	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Muirdale Sanatorium for Tuberculosis	Wauwatosa	.....	350	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	6
PORTO RICO																			
Presbyterian Hospital	San Juan	$100-$150	75	1	...	1	1	...	...	...	1	1	...	2	...	...	[1][18]	...	8
TOTALS			155,932	19	25	105	200	360	71	64	89	133	47	249	157	32	103	45	1,699

* Including Otolaryngology.
† Including Ophthalmology.
‡ Including Urology.
§ Including Gynecology and Obstetrics.
** Including Neuropsychiatry.
†† Including Tuberculosis.
(a) Without maintenance.
(b) Without room.
(c) Residencies open only to hospital's own interns.
(d) Open only to advanced students of the Graduate School of Medicine of the University of Pennsylvania.
1. Orthopedics.
2. Contagious diseases.
3. Dentistry.
4. Physical Therapy.
5. Fractures.
6. Admitting room.
7. Leprology.
8. Three in Contagious Diseases; four in Laboratory.
9. Mental deficiencies only.
10. Village for Epileptics only.
11. One in orthopedics; two in dentistry.
12. Neurology.
13. Cancer.
14. Metabolic disorders only.
15. Laboratory.
16. Roentgenology.
17. Cardiography.
18. Tropical Medicine.

4. PHYSICIANS' COURSES IN HOSPITALS AND GRADUATE MEDICAL SCHOOLS

In addition to the hospitals engaged in undergraduate medical education and those providing internships and approved residencies in specialties, courses of instruction for physicians are given also in numerous hospitals either directly or through certain graduate medical schools. These hospitals and schools are shown in the following list under the title "Approved Graduate Medical Schools."

Besides the list of institutions, there is also given a list of subjects and under each is shown the hospitals or schools where courses in that particular subject can be obtained. There are now sixty-seven institutions and fifty-seven subjects under which the courses of graduate education are available. The list of institutions includes eighteen located in cities of Europe which have been included after recommendation by responsible and reliable authorities. Following these foreign cities is given also a list of associations abroad through which reliable information regarding graduate medical study and other essential needs of physicians while abroad can be obtained.

Before any institution is listed among approved graduate medical schools, the institution is carefully investigated and it is ascertained whether or not it complies with the principles governing graduate medical education, a copy of which may be obtained on application.

Approved Graduate Medical Schools

Revised to Feb. 15, 1927

ALBANY MEDICAL COLLEGE, Albany, N. Y.—Courses in Infectious Diseases and Public Health. Dr. Chas. C. Duryee, Director.

BAYLOR UNIVERSITY COLLEGE OF MEDICINE, Dallas, Texas.—Summer Courses for General Practitioners. Dr. W. H. Moursund, Dean.

BLOOMINGDALE HOSPITAL FOR MENTAL DISEASES, White Plains, New York.—Courses in Psychiatry. Dr. Mortimer W. Raynor, Med. Dir.

CHILDREN'S MEMORIAL HOSPITAL, 735 Fullerton Ave., Chicago.—Special Courses in Infant Feeding, Pediatrics and Otolaryngology. Joseph Brennemann, Chief of Staff.

COLORADO SCHOOL OF TUBERCULOSIS, Colorado Springs, Colorado.—Dr. G. Burton Gilbert, Secretary, 402 Burns Bldg., Colorado Springs.

COLUMBIA UNIVERSITY COLLEGE OF PHYSICIANS AND SURGEONS, New York.—Higher Degree and General Practice Courses. Special Summer Course in Public Health (U. S. P. H. S.). Dr. William Darrach, Dean.

CORNELL UNIVERSITY MEDICAL COLLEGE, New York.—Higher Degree and General Practice Courses. Dr. Walter L. Niles, Dean.

DETROIT COLLEGE OF MEDICINE AND SURGERY, Detroit, Mich.—Course in Public Health. Dr. I. Werness, Registrar.

HARVARD MEDICAL SCHOOL, Courses for Graduates, Boston.—Basic Review and General Practice Courses. Dr. Samuel R. Meaker, Dean.

HOWARD UNIVERSITY SCHOOL OF MEDICINE, Washington, D. C.—Courses for General Practitioners. Dr. Edward A. Balloch, Dean.

INDIANA UNIVERSITY SCHOOL OF MEDICINE, INDIANAPOLIS.—Higher Degree Courses. Dr. Charles P. Emerson, Dean.

JOHNS HOPKINS MEDICAL SCHOOL, Baltimore.—School of Public Health. Dr. William H. Howell, Director.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge.—Higher Degrees in Public Health. Dr. Henry Paul Talbot, Dean.

NEUROLOGICAL INSTITUTE, 149 E. 67th St., New York City.—Clinical Clerkships. Dr. E. G. Zabriskie, Secretary, Medical Board.

NEW HAVEN SCHOOL OF PHYSIOTHERAPY, 303 Whitney Ave., New Haven, Conn.—Dr. Harry Eaton Stewart, Director.

NEW YORK EYE AND EAR INFIRMARY, SCHOOL OF OPHTHALMOLOGY AND OTOLOGY, 13th St., Corner Second Ave., New York City.—Courses in Ophthalmology and Otology. Write to: Secretary of Committee on School, 218 Second Ave., New York City.

NEW YORK POLYCLINIC MEDICAL SCHOOL AND HOSPITAL, 341 to 351 West 50th St., New York City.—Courses for general practitioners. Dr. J. A. Kearney, Executive Officer.

NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL, Second Avenue and Twentieth St., New York City.—Special Internships and General Practice Courses. Dr. William D. Cutter, Dean.

NEW YORK SKIN AND CANCER HOSPITAL, 2nd Ave. and 19th St., New York City.—Courses for General Practitioners. Miss Sara Burns, R.N., Supt.

NEW YORK SOCIETY FOR THE RELIEF OF THE RUPTURED AND CRIPPLED, 321 East 42nd St., New York City. — Special Courses in Orthopedic Surgery. Mr. Joseph D. Flick, Supt.

OHIO STATE UNIVERSITY COLLEGE OF MEDICINE, Columbus.—Course in Public Health. Dr. E. R. Hayhurst, Head of Dept. of Public Health.

PENNSYLVANIA HOSPITAL, 4401 Market St., Philadelphia.—Courses in Neurology and Psychiatry. Dr. Earl D. Bond, Physician in Chief.

PETER BENT BRIGHAM HOSPITAL, 721 Huntington Ave., Boston.—Special Courses in Medicine, Surgery, Pathology and Roentgenology. Dr. J. B. Howland, Med. Supt.

PHYSIATRIC INSTITUTE, Morristown, New Jersey.—Diabetes and Other Metabolic Diseases. Dr. Frederick M. Allen, Director.

PRESBYTERIAN HOSPITAL, San Juan, Porto Rico.—Courses in Tropical Medicine. Dr. Wm. R. Galbreath, Med. Director.

PROVIDENCE CITY HOSPITAL, 150 Eaton St., Providence, Rhode Island.—Courses in Contagious Diseases. Dr. D. L. Richardson, Med. Supt.

ROBERT DAWSON EVANS DEPARTMENT OF CLINICAL RESEARCH AND PREVENTIVE MEDICINE (BOSTON UNIVERSITY SCHOOL OF MEDICINE), 80 E. Concord St., Boston.—Courses in Endocrinology. Dr. Allan Winter Rowe, Chief of Research Service.

SOUTH VIEW HOSPITAL, 18th Ave. and Mitchell St., Milwaukee, Wis.—Courses in Contagious Diseases. Dr. M. R. French, Med. Supt.

STANFORD UNIVERSITY SCHOOL OF MEDICINE, San Francisco.—Summer Courses for Graduates and Residencies in Medicine and Otolaryngology. Dr. William Ophuls, Dean.

STATE HOSPITAL FOR MENTAL DISEASES, Howard, Rhode Island.—Courses in Neurology. Dr. R. H. Sartwell, Med. Supt.

STATE UNIVERSITY OF IOWA COLLEGE OF MEDICINE, Iowa City.—Higher Degree and Summer Courses for Practitioners. Dr. Lee Wallace Dean, Dean.

ST. ELIZABETH'S HOSPITAL, Claremont and LeMoyne Sts., Chicago.—Summer Courses in Clinical Medicine. Sister M. Cordula, Supt.

TRUDEAU SCHOOL OF TUBERCULOSIS, Saranac Lake, New York.—Courses for General Practitioners. Dr. E. R. Baldwin, Director.

TULANE UNIVERSITY GRADUATE SCHOOL OF MEDICINE (New Orleans Polyclinic), New Orleans.—Higher Degrees, Fellowships and General Practice Courses. Dr. Edmund D. Martin, Dean.

UNIVERSITY OF BUFFALO SCHOOL OF MEDICINE, Buffalo, N. Y.—Summer Courses for General Practitioners. Dr. C. Sumner Jones, Dean.

UNIVERSITY AND BELLEVUE HOSPITAL MEDICAL COLLEGE, New York City.—Courses in Dermatology, Syphilology, Surgery, and Regional Anaesthesia, Dr. John Wyckoff, Secretary.

UNIVERSITY OF CALIFORNIA GRADUATE DIVISION, Berkeley-San Francisco.—Higher Degree and Public Health Courses (U. S. P. H. S.). Dr. Charles B. Lipman, Dean.

UNIVERSITY OF CHICAGO, RUSH MEDICAL COLLEGE, Wood and Harrison Sts., Chicago.—Special and Higher Degree Courses and Residencies. Courses in Otolaryngology are now offered and others are being organized. Dr. Ernest E. Irons, Dean.

UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE, Cincinnati.—Fellowships in Surgery. Dr. L. T. More, Dean, Graduate School.

UNIVERSITY OF COLORADO SCHOOL OF MEDICINE, Denver.—Course in Ophthalmology. Dr. Maurice H. Rees, Dean.

UNIVERSITY OF GEORGIA MEDICAL DEPARTMENT, Augusta.—Courses in Public Health. Dr. William H. Goodrich, Dean.

UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE, Chicago. — Higher Degree Courses. Dr. David John Davis, Dean.

UNIVERSITY OF MICHIGAN MEDICAL SCHOOL, Ann Arbor. — Summer Courses in Public Health (U. S. P. H. S.). Dr. Hugh Cabot, Dean.

UNIVERSITY OF MINNESOTA GRADUATE SCHOOL OF MEDICINE, Minneapolis-Rochester.—Higher Degree Fellowships and General Practice Courses. Dr. Guy Stanton Ford, Dean.

UNIVERSITY OF PENNSYLVANIA GRADUATE SCHOOL OF MEDICINE, Philadelphia.—Higher Degree and General Practice Courses. Dr. George H. Meeker, Dean.

UNIVERSITY OF PORTO RICO SCHOOL OF TROPICAL MEDICINE, San Juan, Porto Rico.—(Under the auspices of Columbia University. Dr. William Darrach, Dean.)

UNIVERSITY OF TEXAS SCHOOL OF MEDICINE, Galveston. — Summer Courses for General Practitioners. Dr. Henry Hartman, Act. Dean.

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE, St. Louis.—Courses in Otolaryngology, Pediatrics, Infant Feeding, Obstetrics and Diseases of the Heart. Dr. McKim Marriott, Dean.

YALE UNIVERSITY SCHOOL OF MEDICINE, New Haven, Conn.—Residencies and General Practice Courses. Dr. Wilbur L. Cross, Dean, Graduate School.

Bath.—ROYAL UNITED HOSPITAL.—Course of six clinical demonstrations given each autumn on Saturday afternoons. R. G. Gordon, Hon. Sec., Postgraduate Committee, 9, The Circus, Bath, England.

Berlin.—UNIVERSITY OF BERLIN MEDICAL FACULTY, Berlin, Germany.—Courses in Diseases of the Digestive Tract, Syphilis and Advanced Courses in Specialties. Further information and detailed prospectus may be secured by applying to the "Geschaftsstelle," Berlin, N. W. 6., Luisenplatz, 2-4-Kaiserin Friedrich-Haus.

Birmingham.—UNIVERSITY OF BIRMINGHAM.—Clinical demonstrations on medical and surgical cases, skin diseases, ophthalmic cases, children's diseases, etc., given at the General Hospital and at Queen's Hospital. Ten lectures in morbid psychology from April to July. Address W. F. Haslam, Esq., M.B., F.R.C.S., The University, Edmund Street, Birmingham, England.

Bordeaux.—UNIVERSITY OF BORDEAUX, France.—Special Courses in Oto-rhinolaryngological Surgery, Bronchoscopy, Plastic, Mastoid and Neck Surgery. For information apply to Dr. Leon Felderman, 4428 York Rd., Philadelphia, Pa.

Bristol.—UNIVERSITY OF BRISTOL.—Clinical assistantships in all branches of hospital practice. Write to the Director of Postgraduate Studies (Clinical Section), Pathological Dept., University of Bristol, England.

Cambridge.—ADDENBROOKE'S HOSPITAL.—Operations and demonstrations in the clinical or biochemistry laboratories held every alternate autumn. Write Dr. J. Aldren Wright, 54 Trumpington Street, Cambridge, England.

Glasgow.—UNIVERSITY OF GLASGOW.—Postgraduate courses. Summer months (June to October). (1) General Medical and Surgical Course. (2) Special Clinical Courses and (3) Clinical Assistantships. Winter months demonstrations in Medicine, Surgery, Obstetrics and Ophthalmology. Address the Secretary, Glasgow Postgraduate Medical Association, The University, Glasgow, Scotland.

London.—HOSPITAL FOR SICK CHILDREN, Great Ormond St., London, W. C. 1, England.—Special Graduate Course in Pediatrics. Address, Oswald L. Addison, Dean, Medical School.

London.—LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE (UNIVERSITY OF LONDON), 23 Endsleigh Gardens, Euston Rd., London, N. W. 1. For Prospectus and Calendar apply to the Secretary.

London.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen Square, Bloomsbury, W. C. 1, England.—Special Courses and Lectures on the Nervous System. Dr. J. G. Greenfield, Dean, Medical School.

London.—NORTH-EAST LONDON POST GRADUATE COLLEGE (Prince of Wales General Hospital, Tottenham, N. 15).—Special clinical demonstration in the wards; lecture hall, out-patient departments and affiliated hospitals. Special intensive courses of two week's duration are held at intervals throughout the year. Address the Dean.

London.—UNIVERSITY OF LONDON, University Extension Dept., London, England.—Course of Lectures on Medical Hydrology. Dr. Halburt J. Waring, Dean.

London.—WEST LONDON POST GRADUATE COLLEGE, Hammersmith Broadway, W. 6.—Clinical clerkships for graduate physicians obtainable in the various departments. Address the Dean.

Manchester.—ROYAL INFIRMARY.—Lectures and demonstrations on medical, surgical and special subjects given each autumn and spring. Write to E. Bosdin Leech, M.D., 16 St. John Street, Manchester, England.

Paris. — INTERNATIONAL CLINICS OF OTO-RHINO-LARYNGOLOGY AND FACIO-MAXILLARY SURGERY, St. Louis Hospital, Paris, France. — Courses in Oto-Rhino-Laryngology and Surgery. Applications or inquiries may be addressed to Dr. J. Eastman Sheehan, 636 Fifth Ave., New York.

St. Andrews.—JAMES MACKENZIE INSTITUTE FOR CLINICAL RESEARCH, St. Andrews, Scotland.—Courses for General Practitioners. For further information write to Dr. J. Hunter Paton, Secretary.

Sheffield.—UNIVERSITY OF SHEFFIELD.—Lectures and demonstrations on general and special subjects given each year. Work mainly clinical and practical. Write to the Hon. Secretary, Committee of Clinical Studies, University, Sheffield, England.

Vienna.—UNIVERSITY OF VIENNA, AUSTRIA. Courses in general and special subjects. For information apply to the Kursburo der Wiener Medizinischen Fakultaet, Vienna VIII/1, Schloesselgasse 22.

Sources of Information Abroad

The following agencies have a vast amount of information regarding graduate medical education abroad. American physicians can secure splendid assistance through these organizations.

AUSTRIA

American Medical Association of Vienna, VIII Alserstrasse 9, Vienna, Austria.

Austro-American Institute of Education, I. Elisabethstrasse 9, Vienna, Austria.—Paul L. Dengler, Director.

ENGLAND

American University Union in London, 50 Russell Square, W. C. 1, London, England.

The Fellowship of Medicine and Post Graduate Medical Association, 1, Wimpole St., London, England. — Dr. Arthur J. Whiting, Honorary Secretary.

FRANCE

American University Union in France, 173 Boulevard Saint-Germain, Paris, France.

GERMANY

Amerika-Institut, 8 Universitat Street, Berlin, Germany.—Dr. K. O. Bertling.

Kaiserin Friedrich Haus, Luisenplatz 2, Berlin, Germany.

HUNGARY

American Medical Association of Budapest, Hotel St. Gellert, Budapest, Hungary.—Dr. Joseph Balo, Maria-Utca-39, Budapest.

Graduate Courses in Medical Subjects

WHERE THESE COURSES MAY BE OBTAINED

ANATOMY
Cornell University Medical College.
Harvard Medical School.
Indiana University School of Medicine.
James MacKenzie Institute for Clinical Research, Scotland.
Tulane University Graduate School of Medicine (Fellowships, Review and Short Courses).
University of California Graduate Division, Berkeley (for advanced students).
University of Illinois College of Medicine.
University of Minnesota Graduate School of Medicine.
University of Pennsylvania Graduate School of Medicine.
Yale University School of Medicine.

ANESTHESIA
Harvard Medical School.
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
University and Bellevue Hospital Medical College.
University of California Graduate Division, Berkeley.
University of Pennsylvania Graduate School of Medicine.

BACTERIOLOGY
Columbia University College of Physicians and Surgeons.
Cornell University Medical College.
Harvard Medical School.
Indiana University School of Medicine.
James MacKenzie Institute for Clinical Research, Scotland.
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
Tulane University Graduate School of Medicine.
University of California Graduate Division, Berkeley.
University of Illinois College of Medicine.
University of Minnesota Graduate School of Medicine (Fellowships).
University of Pennsylvania Graduate School of Medicine.
Yale University School of Medicine.

BIOCHEMISTRY
Columbia University College of Physicians and Surgeons.
Cornell University Medical College.
Harvard Medical School.
Indiana University School of Medicine.
James MacKenzie Institute for Clinical Research, Scotland.
New York Post-Graduate Medical School.
Tulane University Graduate School of Medicine.
University of California Graduate Division, Berkeley.
University of Illinois College of Medicine.
University of Minnesota Graduate School of Medicine.
University of Pennsylvania Graduate School of Medicine.
Yale University School of Medicine.

BRONCHOSCOPY
Columbia University College of Physicians and Surgeons.
University of Pennsylvania Graduate School of Medicine.

CANCER
New York Skin and Cancer Hospital.

CARDIOLOGY
Harvard Medical School.
University of California Graduate Division, Berkeley.
University of Pennsylvania Graduate School of Medicine.
Washington University School of Medicine.
Yale University School of Medicine.

CONTAGIOUS DISEASES
South View Municipal Hospital, Milwaukee.
University of California Graduate Division, Berkeley (Residencies).
Yale University School of Medicine.

DENTAL SURGERY
University of Minnesota Graduate Medical School (Fellowships).

DERMATOLOGY
Columbia University College of Physicians and Surgeons.
Cornell University Medical College.
Harvard Medical School.
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
New York Skin and Cancer Hospital.
Stanford University School of Medicine.
Tulane University Graduate School of Medicine.
University and Bellevue Hospital Medical College.
University of California Graduate Division, Berkeley.
University of Minnesota Graduate School of Medicine (Fellowships).
University of Pennsylvania Graduate School of Medicine.

DIABETES
Columbia University, College of Physicians and Surgeons.
Harvard Medical School.
Physiatric Institute, Morristown, N. J.
University of Pennsylvania Graduate School of Medicine.

DIAGNOSIS (Laboratory and Physical)
Columbia University College of Physicians and Surgeons.
Harvard Medical School.
Howard University School of Medicine.
New York Post-Graduate Medical School and Hospital.
Tulane University Graduate School of Medicine.
University of Minnesota Graduate School of Medicine.
Washington University School of Medicine.

ELECTRO-THERAPEUTICS
Columbia University College of Physicians and Surgeons.
Harvard Medical School.
University of Pennsylvania Graduate School of Medicine.

ELECTROCARDIOGRAPHY—(See Cardiology)

ENDOCRINOLOGY
Robert Dawson Evans Dept. of Clinical Research and Preventive Medicine (Boston University School of Medicine).

GASTRO-ENTEROLOGY
Columbia University College of Physicians and Surgeons.
Harvard Medical School.
New York Polyclinic Medical School and Hospital.
Tulane University Graduate School of Medicine.
University of California Graduate Division, Berkeley.
University of Pennsylvania Graduate School of Medicine.

GENITO-URINARY—(See Urology)

GYNECOLOGY
Columbia University College of Physicians and Surgeons.
Harvard Medical School.
Howard University School of Medicine.
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
Stanford University School of Medicine.
Tulane University Graduate School of Medicine.
University of California Graduate Division (Residencies).
University of Minnesota Graduate School of Medicine (Fellowships).
University of Pennsylvania Graduate School of Medicine.

HYGIENE—(See Public Health)

IMMUNOLOGY
Columbia University College of Physicians and Surgeons.
Harvard Medical School.
University of California Graduate Division, Berkeley.
University of Pennsylvania Graduate School of Medicine.
Yale University School of Medicine.

INDUSTRIAL MEDICINE
Detroit College of Medicine and Surgery.
Ohio State University College of Medicine.
University of California, Graduate Division, Berkeley.
Yale University School of Medicine.

INFANT FEEDING
Children's Memorial Hospital, Chicago.
Columbia University College of Physicians and Surgeons.
University of Pennsylvania Graduate School of Medicine.
Washington University School of Medicine.

INSULIN TREATMENT—(See Diabetes)

INTERNAL MEDICINE—(See Medicine)

INTUBATION
University of Pennsylvania Graduate School of Medicine.

LARYNGOLOGY AND RHINOLOGY
Columbia University College of Physicians and Surgeons.
Cornell University Medical College.
International Clinic of Oto-Rhino-Laryngology and Surgery (St. Louis Hospital, Paris, France).
New York Post-Graduate Medical School.
Stanford University School of Medicine.
Tulane University Graduate School of Medicine.
University of Berlin Medical Faculty.
University of Bordeaux, France.
University of Chicago, Rush Medical College.
University of Minnesota Graduate School of Medicine (Fellowships).
Washington University School of Medicine.

MEDICAL HYDROLOGY
University of London, England.

MEDICINE
Columbia University College of Physicians and Surgeons.
Cornell University Medical College.
Harvard Medical School.
Howard University School of Medicine.
Indiana University School of Medicine.
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
Peter Bent Brigham Hospital, Boston.
St. Elizabeth's Hospital, Chicago (Clinical Medicine).
Stanford University School of Medicine (Graduate Courses and Residencies).
Tulane University Graduate School of Medicine.
University of Berlin Medical Faculty.
University of California Graduate Division, Berkeley (Residencies).
University of Minnesota Graduate School of Medicine (Fellowships).
University of Pennsylvania Graduate School of Medicine.
Yale University School of Medicine.

MEDICO-MILITARY SCIENCE AND TACTICS
University of California Graduate Division, Berkeley.

METABOLIC DISEASES
Columbia University College of Physicians and Surgeons.
Harvard Medical School.
Physiatric Institute, Morristown, N. J.
Stanford University School of Medicine.
Tulane University Graduate School of Medicine (Short course).
University of Berlin Medical Faculty.
University of California Graduate Division, Berkeley.
University of Minnesota Graduate School of Medicine.
Yale University School of Medicine.

NEPHRITIS
Columbia University College of Physicians and Surgeons.
Harvard Medical School.
Physiatric Institute, Morristown, N. J.
Yale University School of Medicine.

NEUROLOGY AND PSYCHIATRY
Bloomingdale Hospital for Mental Diseases, White Plains, N. Y.
Columbia University College of Physicians and Surgeons.
Cornell University Medical College.
Harvard Medical School.
National Hospital for the Paralysed and Epileptic, W. C. 1, London.
Neurological Institute, New York City.
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
Pennsylvania Hospital, Philadelphia.
Stanford University School of Medicine.
State Hospital for Mental Diseases, Howard, R. I.
Tulane University Graduate School of Medicine.
University of California Graduate Division, Berkeley.
University of Minnesota Graduate School of Medicine (Fellowships).
University of Pennsylvania Graduate School of Medicine.

OBSTETRICS
Harvard Medical School.
Howard University School of Medicine.
New York Polyclinic Medical School and Hospital.
Stanford University School of Medicine.
Tulane University Graduate School of Medicine (Fellowships, Review and Short Courses).
University of California Graduate Division (Residencies).
University of Minnesota Graduate School of Medicine.
University of Pennsylvania Graduate School of Medicine.
Washington University School of Medicine.

OPHTHALMOLOGY
Columbia University College of Physicians and Surgeons.
Cornell University Medical College.
Harvard Medical School.
Indiana University School of Medicine.
James MacKenzie Institute for Clinical Research, Scotland.
New York Eye and Ear Infirmary (Short Courses and Residencies).
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
Stanford University School of Medicine.
Tulane University Graduate School of Medicine.
University of California Graduate Division, Berkeley.
University of Colorado School of Medicine.
University of Minnesota Graduate School of Medicine.
University of Pennsylvania Graduate School of Medicine.
Washington University School of Medicine.

ORTHOPEDIC, SURGERY
Harvard Medical School.
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
New York Society for the Relief of the Ruptured and Crippled, New York City.
Stanford University School of Medicine.
Tulane University Graduate School of Medicine.
University of California Graduate Division, Berkeley.
University of Minnesota Graduate School of Medicine (Fellowships).
University of Pennsylvania Graduate School of Medicine.
Yale University School of Medicine.

OTOLARYNGOLOGY
Children's Memorial Hospital, Chicago.
Columbia University College of Physicians and Surgeons.
Harvard Medical School.
Howard University School of Medicine.
Indiana University School of Medicine.
International Clinic of Oto-Rhino-Laryngology and Surgery (St. Louis Hospital, Paris).
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
Stanford University School of Medicine (Graduate Courses and Residencies).
Tulane University Graduate School of Medicine.
University of Berlin Medical Faculty.
University of Bordeaux, France.
University of Chicago, Rush Medical College.
University of California Graduate Division, Berkeley.
University of Minnesota Graduate School of Medicine (Fellowships).
University of Pennsylvania Graduate School of Medicine.
Washington University School of Medicine.

OTOLOGY
Columbia University College of Physicians and Surgeons.
Harvard Medical School.
New York Eye and Ear Infirmary (Short Courses and Residencies).
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
Stanford University School of Medicine.
Tulane University Graduate School of Medicine.
University of California Graduate Division, Berkeley.
University of Colorado School of Medicine.
University of Minnesota Graduate School of Medicine.
University of Pennsylvania Graduate School of Medicine.
Washington University School of Medicine.

PARASITOLOGY AND TROPICAL MEDICINE
University of California Graduate Division, Berkeley.
University of Pennsylvania Graduate School of Medicine.

PATHOLOGY
Columbia University College of Physicians and Surgeons.
Cornell University Medical College.
Harvard Medical School.
Indiana University School of Medicine.
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
Peter Bent Brigham Hospital, Boston.
Stanford University School of Medicine.
Tulane University Graduate School of Medicine (Fellowships).
University of California Graduate Division, Berkeley (for advanced students).
University of Illinois College of Medicine.
University of Minnesota Graduate School of Medicine (Fellowships).
University of Pennsylvania Graduate School of Medicine.
Yale University School of Medicine.

PEDIATRICS
Children's Memorial Hospital, Chicago.
Columbia University College of Physicians and Surgeons.
Harvard Medical School.
Hospital for Sick Children, London, England.
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
Stanford University School of Medicine.
Tulane University Graduate School of Medicine (Fellowships).
University of California Graduate Division (Residencies).
University of Minnesota Graduate School of Medicine (Fellowships).
University of Pennsylvania Graduate School of Medicine.
Washington University School of Medicine.
Yale University School of Medicine (Research).

PHARMACOLOGY
Cornell University Medical College.
Harvard Medical School.
Stanford University School of Medicine.
University of California Graduate Division, Berkeley.
University of Illinois College of Medicine.
University of Pennsylvania Graduate School of Medicine.
Yale University School of Medicine.

PHYSIOLOGY
Columbia University College of Physicians and Surgeons.
Cornell University Medical College.
Harvard Medical School.
Indiana University School of Medicine.
James MacKenzie Institute for Clinical Research, Scotland.
Tulane University Graduate School of Medicine.
University of California Graduate Division.
University of Pennsylvania Graduate School of Medicine.
Yale University School of Medicine.

PHYSICAL THERAPY
Columbia University College of Physicians and Surgeons.
Harvard Medical School.
New Haven School of Physiotherapy.
Stanford University School of Medicine.

PREVENTIVE MEDICINE (See Public Health)

PROCTOLOGY
Harvard Medical School.
New York Polyclinic Medical School and Hospital.
Tulane University Graduate School of Medicine.

PUBLIC HEALTH, HYGIENE AND PREVENTIVE MEDICINE
Albany Medical College.
Columbia University College of Physicians and Surgeons.
Detroit College of Medicine and Surgery.
Harvard Medical School.
Howard University School of Medicine.
Johns Hopkins Medical School, Baltimore.
Massachusetts Institute of Technology.
Ohio State University College of Medicine.
State University of Iowa College of Medicine.
University of California Graduate Division, Berkeley.
University of Georgia Medical Department.
University of Michigan Medical School.
University of Minnesota Graduate School of Medicine.
University of Pennsylvania Graduate School of Medicine.
University of Wisconsin Medical School, Madison.
Yale University School of Medicine, New Haven.

RADIOLOGY
Harvard Medical School.
Howard University School of Medicine.
James MacKenzie Institute for Clinical Research, Scotland.
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
New York Skin and Cancer Hospital.
Peter Bent Brigham Hospital, Boston.
Stanford University School of Medicine.
Tulane University Graduate School of Medicine.
University of California Graduate Division, Berkeley.
University of Minnesota Graduate School of Medicine (Fellowships).
University of Pennsylvania Graduate School of Medicine.
Yale University School of Medicine.

REFRACTION
Columbia University College of Physicians and Surgeons.
Cornell University Medical College.
Harvard Medical School.
New York Eye and Ear Infirmary.
New York Post-Graduate Medical School.
Tulane University Graduate School of Medicine.
University of Colorado School of Medicine.
University of Minnesota Graduate School of Medicine.
University of Pennsylvania Graduate School of Medicine.
Washington University School of Medicine.

RESEARCH MEDICINE
University of California Graduate Division (for advanced students).

RHINOLOGY—(See Otolaryngology)

ROENTGENOLOGY—(See Radiology)

SURGERY (Surgical Anatomy, Surgical Diagnosis, Operative Surgery)
Columbia University College of Physicians and Surgeons.
Cornell University Medical College.
Harvard Medical School.
Howard University School of Medicine.
Indiana University School of Medicine.
International Clinic of Oto-Rhino-Laryngology and Surgery (St. Louis Hospital, Paris, France).
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
Peter Bent Brigham Hospital, Boston.
Stanford University School of Medicine.
Tulane University Graduate School of Medicine.
University and Bellevue Hospital Medical College.
University of California Graduate Division (Residencies).
University of Cincinnati College of Medicine (Fellowships).
University of Minnesota Graduate School of Medicine (Fellowships).
University of Pennsylvania Graduate School of Medicine.
Yale University School of Medicine.

SURGERY (Traumatic and Emergency)
New York Post-Graduate Medical School.

SYPHILOLOGY
Columbia University College of Physicians and Surgeons.
Harvard Medical School.
New York Polyclinic Medical School and Hospital.
New York Skin and Cancer Hospital.
Stanford University School of Medicine.
University and Bellevue Hospital Medical College.
University of Berlin Medical Faculty.
University of California Graduate Division, Berkeley.
University of Pennsylvania Graduate School of Medicine.
Yale University School of Medicine.

TROPICAL MEDICINE
Columbia University College of Physicians and Surgeons.
London School of Hygiene and Tropical Medicine.
Presbyterian Hospital, San Juan, Porto Rico.
Tulane University Graduate School of Medicine.
University of Porto Rico, San Juan.

TUBERCULOSIS
Colorado School of Tuberculosis.
The Trudeau School of Tuberculosis, Saranac Lake, N. Y.
Tulane University Graduate School of Medicine (Short Course).
University of California Graduate Division (Residencies).
University of Pennsylvania Graduate School of Medicine.

UROLOGY
Harvard Medical School.
Howard University School of Medicine.
New York Polyclinic Medical School and Hospital.
New York Post-Graduate Medical School.
Stanford University School of Medicine.
Tulane University Graduate School of Medicine.
University of California Graduate Division, Berkeley.
University of Minnesota Graduate School of Medicine.
University of Pennsylvania Graduate School of Medicine.
Yale University School of Medicine.

5. GENERAL STATISTICS REGARDING HOSPITALS IN THE UNITED STATES

Including a Tabulation of Hospital Facilities Available in the United States Territories and Possessions—Also a Tabulation Regarding Hospital Facilities in Canada

As shown in the accompanying tabulation, the total number of hospitals in the United States is 6,946, with a total bed capacity of 859,445. This bed capacity is subdivided into federal hospitals, 63,553; state hospitals, 334,984, and nongovernmental hospitals, 460,908.

The statistics also show that, of the total number of hospitals, 4,103 have fairly well established roentgen-ray departments and 4,170 have fairly well equipped clinical laboratories. There are 1,992 hospitals that have outpatient departments.

The total bed capacity is 859,445, as compared with 836,576 for last year, a net increase in capacity of 22,869—an increase sufficient to care for a population increase of about five million people.

General Statistics on Hospitals in the United States and Possessions

State	Number of Hospitals	Bed Capacity: Federal	Bed Capacity: Nongovernment: State	Bed Capacity: Nongovernment: Total	Bed Capacity: Total	Interns	Roentgen Ray Depts.	Clinical Labs.
Alabama	102	1,108	3,445	4,442	8,995	42	65	67
Arizona	87	1,514	709	2,074	4,297	1	37	30
Arkansas	73	1,029	2,966	3,077	7,072	19	48	52
California	456	6,932	15,955	26,984	49,901	346	264	245
Colorado	129	2,415	2,857	6,853	12,125	63	67	61
Connecticut	94	500	5,844	7,697	14,041	85	53	62
Delaware	16	28	830	653	1,511	9	8	8
District of Columbia	38	7,823	247	2,347	10,417	118	21	24
Florida	72	512	2,399	3,351	6,262	14	43	42
Georgia	104	1,322	5,017	5,278	11,617	89	63	74
Idaho	59	377	1,065	1,513	2,958	1	37	32
Illinois	370	2,785	24,651	31,133	58,569	527	231	246
Indiana	162	1,226	8,458	9,995	16,679	93	94	92
Iowa	194	586	7,751	8,259	16,596	69	133	134
Kansas	140	866	4,942	4,965	10,773	48	85	82
Kentucky	119	852	5,839	5,821	12,512	58	65	58
Louisiana	69	1,429	5,654	3,908	10,991	145	44	48
Maine	69	444	3,096	2,554	6,064	12	41	41
Maryland	92	1,699	5,011	7,125	13,835	197	49	59
Massachusetts	310	2,010	23,625	21,079	46,714	385	170	174
Michigan	228	858	14,161	17,311	32,380	277	132	133
Minnesota	240	1,318	10,650	12,831	24,799	179	140	139
Mississippi	69	425	4,211	2,386	7,022	15	52	51
Missouri	160	762	7,254	15,319	23,335	235	93	103
Montana	72	425	1,822	2,733	4,980	7	40	43
Nebraska	123	155	4,776	4,913	9,844	60	80	83
Nevada	24	164	270	539	973	1	14	10
New Hampshire	53	240	2,100	2,187	4,527	1	34	32
New Jersey	179	133	7,613	20,168	27,914	218	107	114
New Mexico	55	1,092	538	1,683	3,283	..	25	31
New York	645	6,219	50,870	68,913	126,032	1,331	363	354
North Carolina	154	1,097	5,118	6,497	12,712	27	100	106
North Dakota	53	82	2,233	2,085	4,400	6	31	29
Ohio	296	1,813	19,847	20,821	42,481	308	175	170
Oklahoma	112	765	4,725	3,308	8,798	26	72	74
Oregon	95	505	4,286	4,097	8,888	35	52	46
Pennsylvania	417	1,357	18,259	49,870	69,486	678	252	274
Rhode Island	38	280	3,225	2,649	6,154	34	17	21
South Carolina	64	257	2,832	2,718	5,807	38	32	37
South Dakota	64	857	2,145	1,912	4,914	1	40	44
Tennessee	108	1,560	3,764	6,481	11,805	105	57	66
Texas	277	2,022	9,612	12,448	24,082	120	174	188
Utah	40	41	806	1,550	2,397	17	28	24
Vermont	37	62	1,317	1,736	3,115	11	18	13
Virginia	113	1,852	7,526	5,604	14,982	98	72	81
Washington	135	1,743	5,665	7,158	14,566	35	84	78
West Virginia	75	.....	4,053	4,316	8,369	31	55	56
Wisconsin	232	1,206	4,327	18,736	24,329	105	120	121
Wyoming	33	716	648	783	2,147	..	20	18
Totals, U. S.	6,946	63,553	334,984	460,908	859,445	6,320	4,103	4,170
Possessions								
Alaska	26	239	.....	331	600	..	13	14
Canal Zone	16	1,807	570	267	2,644	13	6	11
Hawaii	50	2,090	.....	2,235	4,325	8	19	27
Philippine Islands	91	1,069	7,553	1,865	10,487	37	13	43
Porto Rico	65	180	578	2,080	2,838	10	13	21
Totals, Possessions	248	5,385	8,701	6,808	20,894	68	64	116
Totals, U. S. and Possessions	7,194	68,938	343,685	467,716	880,339	6,388	4,167	4,286

HOSPITALS IN THE UNITED STATES POSSESSIONS

The total number of hospitals in all the possessions outside the United States is 248, with a bed capacity of 20,894. Those hospitals report 116 laboratories, sixty-four roentgen-ray departments, and sixty-eight interns. The grand totals for the United States and its possessions amount to 7,194 hospitals, having a bed capacity of 880,339, with 4,286 laboratories, 4,167 roentgen-ray departments and 6,388 interns.

HOSPITALS IN CANADA

The accompanying table of statistics on hospitals in Canada was compiled from information furnished by the hospitals themselves, lists of which were kindly furnished by the health departments of the respective provinces. We find that there is a total of 458 hospitals of five beds or more in Canada, and they have a total of 62,500 beds.

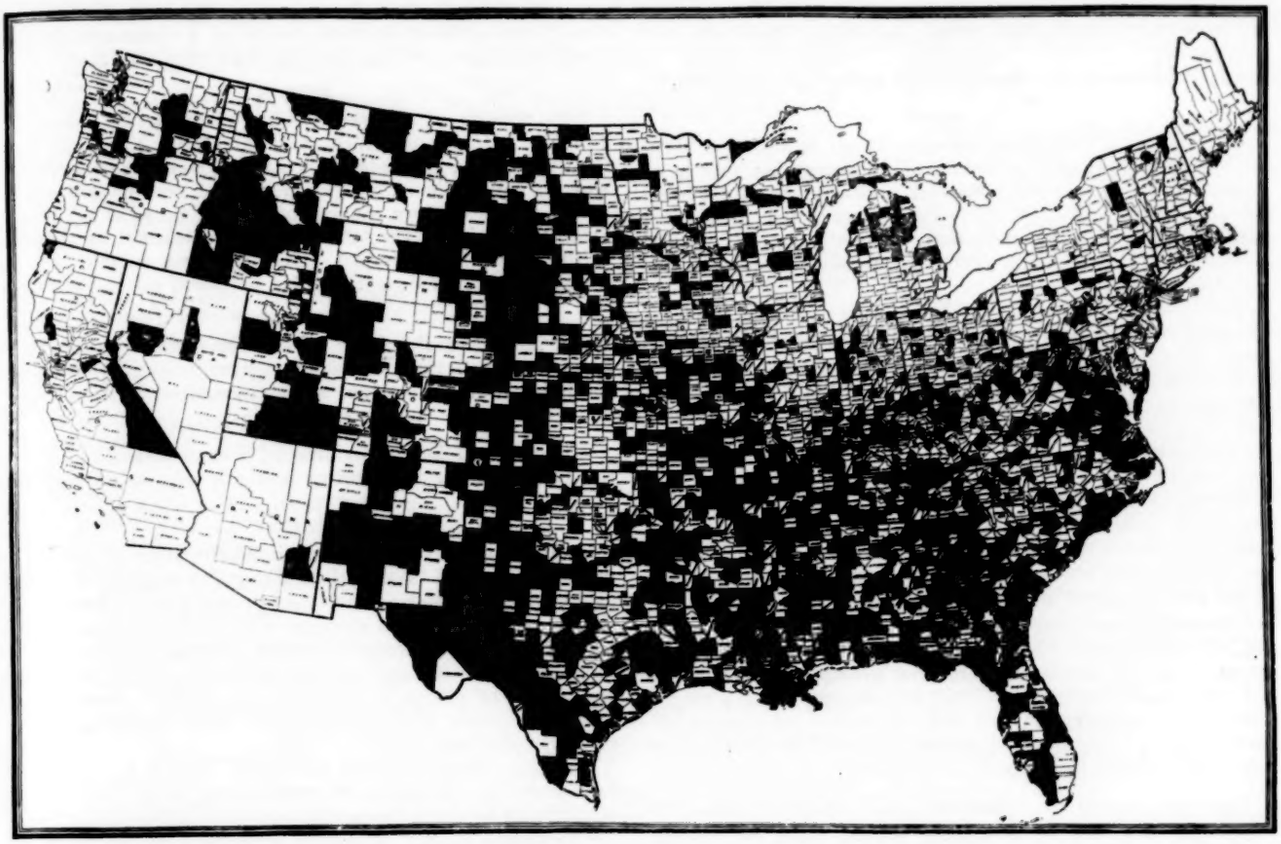
General Statistics on Hospitals in Canada

Province	Number of Hospitals	Bed Capacity: Provincial	Bed Capacity: Non-provincial	Bed Capacity: Total Capacity	Interns	Roentgen Ray Depts.	Clinical Labs.
Alberta	49	497	2,583	3,080	7	25	13
British Columbia	81	2,615	4,009	6,624	15	41	25
Manitoba	35	1,882	3,189	5,071	54	17	16
New Brunswick	18	905	1,075	1,980	..	12	13
Nova Scotia	31	1,325	1,437	2,762	17	15	15
Ontario	135	9,614	12,836	22,450	186	63	69
Prince Edward Island	4	320	194	514	...	2	3
Quebec	56	7,131	8,155	15,286	146	23	32
Saskatchewan	40	1,985	1,999	3,984	8	23	19
Newfoundland	5	471	205	676	1	2	2
Yukon	3	33	37	73	..	3	2
Totals	458	26,781	35,719	62,500	434	226	209

The provincial hospitals of Canada or those run by the provincial governments have a capacity of 26,781; and those run by nongovernmental auspices have a total of 35,719 beds. The province having the largest hospital facilities, naturally, is Ontario, which has a little more than one third the total bed capacity of all of the hospitals in Canada. Two hundred and nine hospitals reported that they have laboratories; 226 roentgen-ray departments and 434 interns are accounted for. Six hospitals in Canada having 144 interns have been accepted by the Council on Medical Education and Hospitals for the training of interns.

DISTRIBUTION OF HOSPITALS IN THE UNITED STATES GEOGRAPHICALLY PRESENTED

The accompanying map shows the geographic distribution of hospitals by counties. The counties in black have no hospitals for community use. Hospitals would not be expected in sparsely populated districts such as are found in western Texas, New Mexico and portions of Utah and Idaho. There is a different situation in portions of the South, where many thickly populated sections are without hospitals, a condition which is a menace to the life and health of the people. Of the counties of the United States, 56 per cent now have hospitals as compared with 44 per cent in 1920, a trend which will aid materially in the distribution of physicians.



THE MAP SHOWS, IN BLACK, THE COUNTIES NOT HAVING HOSPITALS FOR COMMUNITY USE. COUNTIES IN WHITE HAVE INCREASED FROM 44 TO 56 PER CENT SINCE 1920.

III. APPROVED CLINICAL LABORATORIES

A revised list is also published here of the clinical laboratories outside of hospitals which have been approved by the Council on Medical Education and Hospitals after careful investigations have been made.

The standard of measurement by which the worthiness of these laboratories for approval has been ascertained is the "Essentials of an Approved Clinical Laboratory," a schedule of which is published on this page. These essentials were prepared with the cooperation and advice of experts in clinical laboratory work and particularly through the cooperation of the American Association of Pathologists and Bacteriologists, the American Chemical Society, and the American Society of Clinical Pathologists. The concerted action of these associations with the American Medical Association was established in 1923, since which time the work has been done leading to the present reliable list of approved clinical laboratories.

The investigations through which the merits of a clinical laboratory are determined are: (*a*) the receipt of information regarding the laboratory, its director and its staff by means of a questionnaire; (*b*) information based on examinations made by 152 authorized inspectors, representing every state and practically every community in the United States. The Council is also closely cooperating with the existing state agencies having to do with clinical laboratories. The Council is now in a position, whenever doubts arise, to have inspections made also by some representative from headquarters. There are now 145 laboratories which, after careful investigation, have been placed on the approved list.

ESSENTIALS OF AN APPROVED CLINICAL LABORATORY

Revised to March 12, 1927

DEFINITION

A clinical pathologic laboratory is an institution organized for the practical application of one or more of the fundamental sciences by the use of specialized apparatus, equipment and methods, for the purpose of ascertaining the presence, nature, source and progress of disease in the human body.

Only those clinical laboratories in which the space, equipment, finances, management, personnel and records are such as will insure honest, efficient and accurate work may expect to be listed as approved.

LOCATION, HOUSING AND EQUIPMENT

The housing and light should be adequate for the proper functioning of the laboratory. The equipment should be sufficient to permit all essential technical procedures to be properly carried out.

SCOPE

A general clinical laboratory should be prepared to render the following services:

(*a*) Hematologic: Blood counts, blood groupings and coagulation tests, and tests for blood parasites in general.

(*b*) Biochemical: Qualitative and quantitative analyses of urine, blood, gastric contents, body fluids, feces, intestinal contents and cerebrospinal fluids; renal and hepatic function tests and basal metabolism.

(*c*) Bacteriologic: Bacteriologic diagnoses; preparation of vaccines and blood and body fluid cultures.

(*d*) Serologic: Serologic diagnoses; agglutination, complement fixation, or precipitin and lysis tests.

(*e*) Pathologic: Preparation of paraffin, celloidin or frozen sections, microscopic and gross pathologic specimens and necropsies.

(*f*) Parasitologic: Protozoal and zoological diagnoses.

PERSONNEL

(*a*) *The Director.*—The Director of an approved clinical laboratory should be a graduate of an acceptable college or university of recognized standing, indicating proper educational attainments. He shall have specialized in clinical pathology, bacteriology, pathology, chemistry, or other allied subjects, for at least three years. He must be a man of good standing in his profession.

The Director shall be on full time, or have definite hours of attendance, devoting the major part of his time to the supervision of the laboratory work.

The Director may make diagnoses only when he is a licensed graduate of medicine, has specialized in clinical pathology for at least three years, is reasonably familiar with the manifestation of disease in the patient, and knows laboratory work sufficiently well to direct and supervise reports.

Where the Director is not a licensed physician the laboratory shall issue no reports containing diagnoses and prognoses, unless such diagnoses and prognoses are made and signed by a staff physician having the qualifications specified above for a medical director.

(*b*) *Assistants.*—The Director may have a corps of qualified assistants and technicians, responsible to him, and for whom he is responsible to carry out promptly, intelligently, and accurately the several kinds of service the laboratory offers. All their reports, not only of tissues but also of all bacteriologic, hematologic, biochemical, serologic and pathologic data, should be made to the director.

REPORTS

An approved clinical laboratory should make its reports through the director. If the director is not a physician, any report making diagnoses or prognoses shall carry also signature of the staff physician, and such reports shall be made solely to the physician in charge of the patient. All blanks for reports and other documents should have the name of the director printed on them, and if of a diagnostic or prognostic character, the name of the staff physician also.

RECORDS

Full records of all examinations made by the laboratory, suitably indexed and filed, are essential. Every specimen analyzed in the laboratory should be given a serial number, which should follow that specimen in the records and reports. When the laboratory report concerns a hospital patient, an exact transcript of the laboratory record should be appended to the hospital case record. Each specimen submitted to the laboratory should have appended pertinent clinical data.

LIBRARY

The laboratory should be provided with, or have convenient access to, a library including current scientific books and journals on all the various subjects required in its work.

FEES

There should be no dividing of fees or rebating between the laboratory or its director and any physician, corporate body or group.

PUBLICITY

Publicity of an approved clinical laboratory should be in professional good taste and be limited to statements of fact, as the name, address and telephone number of the laboratory; names and titles of the director and other active responsible personnel; fields of work covered; office hours; directions for sending specimens, etc., and should not contain misleading statements or claims of unusual superiority. It should not advocate medical fads nor lay undue stress on the importance of laboratory findings.

Only the names of those rendering regular service to the laboratory should appear on letterheads, or any other form of publicity as being connected with the laboratory.

Advertising matter should be directed only to physicians either through bulletins or through recognized technical journals, and never to the nonprofessional public, as, for example, by announcements in popular journals and periodicals, circulars, pamphlets, telephone lists or other means.

APPROVED CLINICAL LABORATORIES

All the laboratories on the approved list are supervised by persons having the M.D. degree, and conform to the other requirements of the Council on Medical Education and Hospitals. The "Essentials of an Approved Clinical Laboratory" precedes this list.

ARIZONA

Phoenix
Pathological Laboratory, Goodrich Bldg., W. W. Watkins and H. P. Mills, Directors.

Tucson
Tucson Clinical Laboratory, 20 E. Ochoa St. Philip B. Newcomb, Director.

ARKANSAS

Fort Smith
Cooper Clinic Pathological Laboratory, Cooper Clinic Bldg. A. A. Blair, Director.
Holt Clinic Laboratory, 1018½ Garrison Ave. John H. Harvey, Director.

Hot Springs National Park
Laboratory of Clinical Medicine, Dugan-Stuart Bldg. Dee C. Lee, Director.

Little Rock
The Central Laboratory, Hall Bldg. S. F. Hoge and D. T. Hyatt, Directors.
Drs. Rhinehart & Rhinehart's Laboratory, 7th and Main Sts. Darmon A. Rhinehart, Director.

Pine Bluff
Pittman Laboratories, Citizens Bank Bldg. Wm. G. Pittman, Director.

CALIFORNIA

Hollywood
Hollywood Clinical Laboratory, 1680 N. Vine St. E. H. Ruediger, Director.

Los Angeles
Clinical Laboratory of Drs. W. V. Brem, A. H. Zeller and R. W. Hammack, Pacific Mutual Bldg.
Clinical Laboratory of Drs. Butka and Pratt, 1052 W. 6th St. H. E. Butka, Director.
Moore-White Clinic, Laboratory, 511 S. Bonnie Brae St. Robt. B. Hill, Director.

Oakland
The Western Laboratories, 2404 Broadway. Gertrude Moore, Director.

Pasadena
Pasadena Clinical Laboratory, 65 N. Madison Ave. Gustav F. Ruediger, Director.

San Diego
Clinical Laboratory, 520 E St. R. J. Pickard, Director.

San Francisco
Diagnostic Laboratories, 490 Post St. Ernst A. Victors, Director.
Oliver-Knapp Clinical Laboratory, 490 Post St. Harry R. Oliver, Director.
O'Reilly-Wheeler Laboratory, 870 Market St. B. C. N. O'Reilly, Director.
Spiro's Laboratory, Flood Bldg. Harry Spiro, Director.

Stockton
X-Ray and Pathological Laboratory, Commercial and Savings Bank Bldg. C. D. Holliger, Director.

Woodland
Woodland Clinic Laboratory, 3d and Cross Sts. DeLos S. Pulford, Jr., Director.

COLORADO

Colorado Springs
Clinical Laboratory, Burns Bldg. Minnie E. Staines, Director.

Denver
Clinical Laboratory of Ward Burdick, Republic Bldg.
Clinical Laboratory of Philip Hillkowitz, Metropolitan Bldg.
Clinical Laboratory of Wm. C. Mitchell, Metropolitan Bldg.
Clinical Laboratory of Wm. W. Williams, 209, 16th St.

Pueblo
Clinical Laboratory of C. W. Maynard, 702 N. Main St.

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Hartford
Hartford Hospital, Hall-Wilson Laboratory, 20 S. Hudson St. Wilmar M. Allen, Director.

DISTRICT OF COLUMBIA

Washington
Clinical Laboratory, 1801 Eye St. N.W. H. H. Leffler, Director.
National Vaccine and Antitoxin Institute, 1515 U St. N.W. R. A. Cutting, Director.

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Medical Research Laboratories, Inc., 25 E. Washington St. C. C. Croy, Director.
The Murphy Laboratories, 4753 Broadway. L. J. Murphy, Director.
National Pathological Laboratory, 5 S. Wabash Ave. Josiah J. Moore, Director.
Dr. Homer K. Nicoll's Laboratory, 122 S. Michigan Ave.

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Quincy Clinical Laboratory, Majestic Bldg. Frank Cohen, Director.

Rockford
Rockford Hospital Laboratory. Henrietta A. Calhoun, Director.
Rockford Laboratories for Medical Research, William Brown Bldg. John R. Porter, Director.

INDIANA

Fort Wayne
Fort Wayne Medical Laboratory, Inc., 347 W. Berry St. Bonnelle W. Rhamy, Director.

Indianapolis
The Laboratory for Clinical Diagnosis, Hume-Mansur Bldg. Harry K. Langdon, Director.

La Fayette
Lafayette Cinical Laboratory, Lafayette Life Bldg. Frank P. Hunter, Director.

South Bend
South Bend Medical Laboratory, 604 N. Main St. Alfred S. Giordano, Director.

KANSAS

Topeka
Lattimore Laboratory, 618 Mills Bldg. J. L. Lattimore, Director.

KENTUCKY

Lexington
Laboratory of Lexington Clinic, 190 N. Upper St. Elmer S. Maxwell, Director.

LOUISIANA

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Clinical Laboratory of Louis A. Hebert, Pujo St.

Shreveport
Laboratory of F. G. Ellis and W. P. Butler, 941 Margaret Pl.

MAINE

Portland
Dr. Mortimer Warren's Laboratory, 131 State St.

MARYLAND

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Clinical Laboratory of Howard J. Maldeis, 605 Park Ave.
Clough Laboratory, 24 E. Eager St. Paul W. Clough, Director.
Dr. Henry T. Collenberg's Laboratory, 904 N. Charles St.

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Clinical Laboratory, 205 Beacon St. Francis L. Burnett, Director.
Physicians' Clinical Laboratory, 30 Huntington Ave. J. Edwin Oslin, Director.

Brookline
Sias Laboratory, 225 Summit Ave. C. L. Overlander and F. H. Slack, Directors.

Springfield
New England Laboratories, Inc., 121 Chestnut St. Geo. L. Schadt, Director.

MICHIGAN

Detroit
Detroit Cinical Laboratory, 2033 Park Ave. W. L. Brosius, Director.
National Pathological Laboratory, David Whitney Bldg. Fred J. Eakins, Director.
Owen Clinical Laboratory, Stroh Bldg. Robt. G. Owen, Director.

Grand Rapids
Clinical Pathological Laboratory, 110 E. Fulton St. James S. Brotherhood, Director.
Grand Rapids Clinical Laboratory, Metz Bldg. Geo. L. Bond, Director.

Saginaw
Central Laboratory, 302 S. Jefferson St. Oliver W. Lohr, Director.

MINNESOTA

Minneapolis
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The Laboratories, Vicksburg Sanitarium and Crawford Street Hospital, Crawford and Monroe Sts. Leon S. Lippincott, Director.

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Laboratory of Clinical Pathology, 124 McGee St. Frank J. Hall, Director.

Springfield
Dr. Murray C. Stone's Laboratory, 331 St. Louis St.

St. Louis
Clinical Laboratory of George Ives, University Club Bldg.
Gradwohl Laboratories, 3514 Lucas Ave. R. B. H. Gradwohl, Director.
Dr. D. L. Harris' Laboratory, Metropolitan Bldg.
National Pathological Laboratory, 607 N. Grand Blvd. Ralph L. Thompson, Director.
Pathological and Bacteriological Laboratory of C. L. Klenk, 508 N. Grand Ave.
Private Laboratory of R. Buhman, 537 N. Grand Blvd.

MONTANA

Great Falls
Walker Laboratories, Stanton Bank Bldg. Thos. F. Walker, Director.

NEBRASKA

Omaha
Laboratory of Clinical Pathology, City National Bank Bldg. Michael G. Wohl, Director.
The Nebraska Laboratory, Brandeis Theatre Bldg. Ernest T. Manning, Director.

NEVADA

Reno
Clinical Laboratory of Dr. Grover, St. Mary's Hospital. Arthur L. Grover, Director.

NEW JERSEY

Atlantic City
Laboratories of the Atlantic City Hospital, Ohio Ave. Robt. A. Kilduffe, Director. (Does no basal metabolism nor electrocardiographic work.)

Orange
Cline Laboratory, 264 Central Ave. Benj. F. Cline, Director.

NEW MEXICO

Albuquerque
Van Atta Laboratories, First National Bank Bldg. J. R. Van Atta, Director.

NEW YORK

Albany
Bender Hygienic Laboratory, 138 S. Lake Ave. James R. Lisa, Director.

Binghamton
Kilmer Pathological Laboratory, 21 Park Ave. Geo. H. Fox, Director.

Brooklyn
Biophil Laboratory for Diagnosis and Research, 32 Court St. Florence A. Black, Director.
Brooklyn Diagnostic Institute, 867 St. Marks Ave. Jacob Gutman, Director.
Dr. Horace Greeley's Laboratory, 140 Clinton St.
Lindsay Laboratories, 114-118 Ashland Pl. M. F. DeLorme, Director.
Private Laboratory of William Moitrier, Jr 1219 Dean St.

Jamaica
Campbell Biological and Analytical Laboratory, 89—18, 139th St. Noel H. M. Campbell, Director.

New York
Analytical and Bacteriological Laboratory, Bendiner & Schlesinger, 3d Ave. and 10th St. Henry T. Brooks, Director.
Harvey Laboratories, 355 E. 149th St. Elsie Fox, Director.
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Laboratory of Andrew A. Eggston, 653 Park Ave.
Laboratory of Joseph Felsen, 121 E. 60th St.
Laboratory of William McK. Higgins, 666 Madison Ave.
Medical Laboratory, 126 E. 64th St. Cyrus W. Field, Director.
National Pathological Laboratory, 18 E. 41st St. Archibald McNeil, Director.
Pathological Laboratory of Julius Pincus, 250 W. 75th St.
Dr. Frederic E. Sondern's Clinical Laboratory, 20 W. 55th St.

Rochester
Medical Laboratory, 35 Chestnut St. Geo. W. O'Grady, Director.

Troy
Laboratory of H. W. Carey, 72, 2d St.

OHIO

Cincinnati
Langdon-Meyer Laboratories, 519 Main St. Fletcher Langdon, Director.

Cleveland
The Cleveland Laboratory, Erie Bldg. R. G. Schnee, Director.
The Medical Chemical Laboratory, Rose Bldg. John G. Spenzer, Director.

Columbus
Clinical and Pathological Laboratory, 370 E. Town St. J. J. Coons, Director.

Dayton
Private Clinical Laboratory, 920 Fidelity Bldg. Foy C. Payne, Director.

Springfield
Springfield Clinical and Pathological Laboratory, Fairbanks Bldg. Clement L. Jones, Director.

Toledo
Clinical Laboratory, Cotton Bldg. Theodore Zbinden, Director.
Toledo Clinical Laboratories, 1611, 22d St. R. C. Longfellow, Director.

OKLAHOMA

Bartlesville
Clinical Laboratory, Union National Bank Bldg. Elizabeth Chamberlin, Director.

Oklahoma City
Medical Arts Laboratory, Medical Arts Bldg. John E. Heatley, Director.

Okmulgee
Laboratories of Thomas A. Hartgraves, Commerce Bldg.

Tulsa
Terrell's Laboratories, 10 E. 3d St. S. C. Venable, Director.

OREGON

Portland
Clinical Laboratory, Medical Arts Bldg. Herbert H. Foskett, Director.
Medical Laboratory, 6th and Alder Sts. Harriet J. Lawrence, Director.

PENNSYLVANIA

Philadelphia
Laboratory of Clinical Medicine and Pathology, 1831—33 Chestnut St. Damaso de Rivas, Director.
Laboratory of Pathology and Bacteriology, 1524 Chestnut St. Eugene J. Asnis, Director.

Pittsburgh
Private Laboratory of Moses H. Baker, 121 University Pl.

TENNESSEE

Chattanooga
Clinical Laboratory, Volunteer State Life Bldg. Tolbert C. Crowell, Director.

Knoxville
Dr. R. V. De Pue's Laboratory, 503 W. Church St.

Memphis
Laboratory of James S. Fleming, Exchange Bldg.
X-Ray and Pathological Laboratories, Exchange Bldg. L. Von Schmittou, Director.

Nashville
Laboratory of Clinical Pathology, Lambuth Bldg. Herman Spitz, Director.

TEXAS

Austin
Clinical Laboratory, Scarbrough Bldg. Geo. M. Graham, Director.

Beaumont
Laboratory of Clinical Pathology, San Jacinto Life Bldg. Wilbur F. Thomson, Director.

Corsicana
Laboratory of Richard C. Curtis, 101 N. Beaton St.

Dallas
Clinical Laboratory, Medical Arts Bldg. J. H. Black, Director.
Laboratory of Clinical Pathology, Medical Arts Bldg. Marvin D. Bell, Director.
Terrell-Carter Laboratory, Medical Arts Bldg. Chas. F. Carter, Director.

Denison
The Denison Clinical Laboratory, Security Bldg. Paul Pierce, Director.

El Paso
Turner's Clinical Laboratory, First National Bank Bldg. Geo. Turner, Director.
Waite's Laboratory, First National Bank Bldg. Willis W. Waite, Director.

Fort Worth
Terrell's Laboratories, Texas National Bank Bldg. Truman C. Terrell, Director.

Houston
Dr. Edward F. Cooke, Laboratory of Clinical Pathology, Keystone Bldg.
Clinical Laboratory, 429 Kress Bldg. Martha A. Wood, Director.

San Antonio
The Hamilton-Stout Laboratories, Medical Arts Bldg. B. F. Stout, Director.

Wichita Falls
Glover's Laboratories, Waggoner Bldg. M. H. Glover, Director.

UTAH

Salt Lake City
Clinical Laboratory of Thomas A. Flood, 10 W. First South St.

WASHINGTON

Seattle
Physicians' Clinical Laboratory, Cobb Bldg. O. J. West, Director.

Spokane
Hollister Stier Laboratories, Old National Bank Bldg. Robt. F. E. Stier, Director.
Wassermann and Diagnostic Laboratories of Drs. M. M. Patton and F. R. Patton, Paulsen Bldg.

WEST VIRGINIA

Bluefield
St. Luke's Hospital Pathological Laboratory, 1710 S. Bland St. Margaret S. Grant, Director.

WISCONSIN

Milwaukee
Hopkinson Laboratory, 211 Grand Ave. E. L. Tharinger, Director.
Seelman Laboratories, Inc., 79 Wisconsin St. J. J. Seelman, Director.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 NORTH DEARBORN STREET - - - CHICAGO, ILL.

Cable Address - - - - "Medic, Chicago"

Subscription price - - - - - - Five dollars per annum in advance

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SATURDAY, MARCH 12, 1927

HOSPITAL SERVICE IN THE UNITED STATES

This week THE JOURNAL presents the sixth annual compilation of statistics regarding hospital service in the United States. The information is presented in a manner showing as nearly as can be done at this time the hospital's relationship to medical education. The care rendered to hospital patients depends largely on the extent to which the educational function is developed.

PRESENT SUPPLY OF HOSPITALS

Excluding some that are deemed unworthy of publication, there are now listed 6,946 hospitals in the United States having a total capacity of 859,445 beds, an increase of fifty hospitals and 22,869 beds since a year ago. If the hospitals in the United States possessions were included, the number this year would be increased by 248 hospitals and an additional capacity of 20,894 beds. Through the courteous cooperation received from officers of Canadian hospitals, figures [1] are published showing 458 hospitals in the Dominion of Canada, the total capacity of which is 62,500 beds.

HOSPITALS HAVING NURSE TRAINING SCHOOLS

Special consideration is given this year to the nurse training schools in the United States. Such schools are found in 2,155 hospitals, which have a capacity of 339,940 beds, or an average of 186 beds each. Of the nurse training schools, forty-eight are in hospitals having less than twenty beds and 345 are in hospitals having between twenty and thirty-nine beds. There are 393 schools, therefore, in hospitals having less than forty beds. It is noteworthy also that some nurse training schools are found in hospitals limited to certain types of patients, such as nervous and mental, tuberculous, orthopedic or maternity patients and some which do not have affiliations with other hospitals. The pupil nurses in these hospitals, therefore, do not obtain a training in caring for as many varieties of patients as is desirable.

1. See page 836.

STATE REQUIREMENTS OF NURSE TRAINING SCHOOLS

In six states, requirements of preliminary education have not been established; one or more years of high school work are required in twenty-three states; two or more years are required in fourteen states, and in five states, four years of preliminary training in a high school are required.

In twenty-five states, three full years of thirty-six months in the nurse training school are required; six states require from twenty-eight to thirty months; one state requires twenty-six months, and seventeen states require twenty-four months. Of all the nurse training schools, 1,814 are listed as accredited by the state boards of nurse registration, while 264 are not so approved. In North Carolina the survey is still incomplete.

Of the nurse training schools, 2,023 require that their students be at least 18 years of age before they are enrolled, while seventy permit younger women to enter.

UNIVERSITY SCHOOLS—MEN NURSES —GRADUATE COURSES

There are nurse training schools in twenty-four universities which require a five year course leading to a baccalaureate degree in nursing. In these schools, 368 students are enrolled, fifty-two of whom received degrees last year.

There are twenty-eight hospitals which will accept nurses of both sexes, and one which accepts men only. The reports show 202 men students enrolled, and the usual proportion graduating would be about forty. In the 189 nurse training schools, 1,045 graduate students during the last year were enrolled for additional training in special fields.

TOTAL REGISTERED NURSES

Altogether there are 327,045 registered nurses in the United States, or about twenty-eight to every 10,000 persons. These figures, however, do not represent the total number of nurses in practice. The total number of unregistered nurses has not been ascertained.

HOSPITALS RELATED TO MEDICAL SCHOOLS

This year, information is published also regarding hospitals in which the clinical facilities are used to a greater or less extent in undergraduate medical education. A careful investigation shows that at least 316 hospitals are so utilized, of which forty are both owned and controlled by the medical school, and thirty-seven, although not owned by the university, are fully controlled so far as the use of patients for teaching is concerned. In forty others, the material is generously used for clinical teaching; in fifty-nine, the material is moderately used, and in 131, clinics for medical students are occasionally held. The names of the medical schools making use of clinical material are given.

HOSPITALS APPROVED FOR INTERN TRAINING

There are now 578 hospitals approved for the training of interns. Although there has been a net increase

of only seventy hospitals since 1914, nevertheless there has been a great improvement in quality, as 189 hospitals were dropped from the list and 259 others have been added. The essentials by which the hospital's eligibility for approval are measured have also been considerably strengthened. The 1914 list provided only 2,667 internships, varying considerably in value, while the present list provides 4,952, the value of which has been more carefully investigated.

HOSPITALS PROVIDING HIGHER INTERNSHIPS OR RESIDENCIES

The statistics contain also a list of hospitals which provide higher internships, or—a better term—residencies, through which a higher training can be obtained and skill developed either in some specialty or for general practice. Most of these are general hospitals which are also approved for the training of interns. Special hospitals which are otherwise satisfactory are added to the list with the understanding that physicians will not be accepted unless they have already completed general internships. After careful inquiries, 270 hospitals have been listed which provide 1,699 residencies, the majority of which are in specialties, while in others a higher skill can be developed for general practice.

GRADUATE MEDICAL COURSES

A list is published of hospitals and graduate medical schools where physicians can obtain an advanced training either for specialization or for general practice. Included is a list of subjects, with the names of institutions that give acceptable courses. The section further includes a revised schedule of principles by which the approval of such schools is determined.

APPROVED CLINICAL LABORATORIES

Another section includes a list of clinical laboratories, which, after careful investigation, have been approved by the Council, and also a list of the essential factors in a clinical laboratory considered worthy of approval. One year ago, a provisional list of 162 laboratories was published. Since that time, however, and with the more reliable information that has been obtained, the list has been revised and 145 have been found worthy of approval.

SUMMARY

The statistics published this week give some idea of the tremendous place now occupied by hospitals in medical education and medical practice. Hospitals are destined to render a still greater service, however, as they further assume their educational function, when their work through clinical conferences is more generally extended, and when they become more fully permeated with the spirit of investigation and research. Then the hospitals will render a more efficient service to the public, not only providing the needed care in times of sickness and distress, but also in educating the people of their communities in regard to scientific and attested facts in medicine.

BORIC ACID AND A HOSPITAL ACCIDENT

Occasionally the world is startled when, by some fortuitous circumstance, death comes suddenly to human beings. Chicago has recently provided two such instances of medical importance. A landlord used cyanic gas to fumigate a vacant apartment. A mother and baby sleeping in the apartment above died of the inhalation, and the landlord, in his grief, committed suicide. In a hospital, through a confusion of technic among three nurses, infants in the nursery were apparently given boric acid solution instead of drinking water and six died. Probably such an accident will not happen soon, if ever again. But as long as there are human beings handling devices or drugs of possible danger, accidents will occur.

New interest is created for the moment in the potentialities of boric acid as a poison. Compared with phenol, cresol or mercury preparations, it is relatively nonpoisonous. Cases are recorded, however, of the death, even of adults, when considerable quantities of saturated boric acid solutions have been introduced into the body. If a drug is to be antiseptic, it must have some toxic properties. But in the present instance babies weighing about 7 pounds (3.2 Kg.) each may have received from 15 to 60 cc. of a saturated solution in twenty-four hours, or approximately 0.8 to 3 Gm. of boric acid. In reported cases, from 1 to 3 Gm. have produced serious symptoms, and from 15 to 30 Gm. have been fatal to adults.

The deadly character of cyanic gas and cyanides has already led to the enactment in some jurisdictions of laws limiting sales and even forbidding the use of the gas for disinfecting purposes except as may be specially authorized by the proper authorities in each case. The tragic deaths of these babies from boric acid is not unlikely to lead to the promulgation of rules by hospital authorities to safeguard the drinking water supplied patients against similar mishaps, whether from boric acid or more dangerous substances.

Boric acid is so frequently used as a household article that its power for harm is ordinarily overlooked. Yet its potential danger is such that its use as a food preservative has long been forbidden in the United States, France, Germany, Holland, Italy and Spain. Only recently its use has been forbidden in Great Britain by the ministry of health, acting on the basis of a prolonged investigation of various methods of preserving food. Boricized milk, it was reported, had caused serious bowel disorder in infants. With such facts as these in mind, it does not seem remarkable that boric acid given in water to new-born infants should cause death, however tragic and startling the mishap may be.

Fatalities to many persons through the failure of an engineer in charge of a train, an usher in a theater, the captain of a boat, the elevator man, or a cook are not infrequent. They become the news of the day and in the rush of modern life pass soon into the limbo of for-

gotten things. The deaths of six infants in a hospital to which mothers came for the safe care that a hospital should provide must not be permitted to pass without the lesson of the accident being driven home to the personnel of every hospital in the country. The guardians of the well have only a partial responsibility; the caretakers of the sick and of the infant have responsibility that is complete, that demands eternal vigilance, that permits no escape. Their responsibility cannot be lightly assumed and, once taken, must be borne to the utmost of human strength and wisdom.

ACQUIRED IMMUNITY IN SYPHILIS

Knowledge of acquired immunity has been evolved largely as a result of studies on bacterial or virus infections. In attempting to apply this knowledge to syphilis, the investigator is confronted with baffling problems. Bacterial or virus infections are usually followed by complete recovery, which opens the way for the study of acquired immunity. In syphilis, the question of complete cure is not yet fully settled, a fact that renders the problem of immunity correspondingly difficult. Furthermore, the clinical syndrome in bacterial infections is different from that in syphilis with its various stages and late manifestations. It was perhaps to be expected that the immunologic syndrome in the two types of infection would also differ.

As far as man is concerned, natural immunity in syphilis apparently does not exist. While the intensity of the reaction to syphilitic infection might vary in different persons, all appear to be susceptible. Furthermore, only man is the propagator of the infection. Monkeys and rabbits are susceptible, but they carry the infection only under experimental conditions.

The study of acquired immunity in syphilis has recently gained a new impetus by the investigations of Kolle [1] in Germany and Chesney and Kemp [2] in this country. An admirable summary is presented by Chesney.[3] It has long been known that reinfection in syphilis was rare, which suggested the possibility that the original infection imparted some degree of immunity. Neisser,[4] however, insisted that there was no acquired immunity in syphilis. This view he based on the results of extensive experiments with syphilized monkeys. He found that animals which were thoroughly treated and presumably cured could readily be reinfected with this disease, whereas those which were not sufficiently treated and were known still to have foci of infection could not be reinfected. This led him to conclude that the long established clinical observation that man was rarely reinfected with syphilis was due, not to acquired immunity but to the presence of the original infection resulting from incomplete cure, and that patients who developed the infection a second time were those who were completely cured. This view has held sway among syphilologists for more than a decade, and reinfection has practically become a criterion for complete cure in this disease.

Kolle, Chesney and Kemp and others observed an apparently new criterion for reinfection in syphilis. They worked with rabbits, and they found that the time at which treatment was begun was a determining factor as to whether an animal could be reinfected. Thus, if treatment was begun in less than six weeks after the onset of the disease, reinfection was possible; if treatment was begun from six to twelve weeks, reinfection results were variable, but if treatment was begun after twelve weeks' duration of the infection, reinfection was practically impossible. Kolle, adhering to Neisser's view, interpreted these observations as indicating the importance of early therapy. If a rabbit was treated early after infection, he stated, an abortive cure was obtained. The animal being cured, it immediately became susceptible to reinfection. If treatment was begun ninety days or longer after infection, complete cure was rare, and therefore reinfection was rare.

However, this interpretation by Kolle is not substantiated by the experimental observations of Chesney and Kemp. These workers first brought up the question of the criterion of cure of syphilis in the rabbit, and concluded that if the lymph nodes of syphilitic rabbits were macerated and injected into normal rabbits without infecting them, it was reasonable to assume that the syphilized animals were cured. That lymph node sterility is a good indicator for cure has already been shown by Nichols and Walker.[5] Employing this indicator, Chesney and Kemp found that lymph nodes of treated rabbits were incapable of transmitting the disease to normal rabbits, irrespective of the time at which treatment was begun. This indicated that the animals were probably cured to the same degree whether treatment was begun six weeks or twelve weeks after infection. Yet the animals treated early could be reinfected readily, while the animals treated late could not be reinfected. This observation led these workers to suggest that rabbits probably acquire some degree of immunity to syphilis, but that it is slow in development. If treated shortly after infection, the animals can be reinfected readily because they have not had sufficient time in which to develop immunity; if, however, treatment is withheld for three months or longer, the animals in most cases develop immunity to the disease, and reinfection therefore is rare. They believe that their work does not justify withholding treatment in man after infection with a view to his possible development of immunity; that the value of early treatment in man is based on the

1. Kolle, W.: Deutsche med. Wchnschr. **48**: 1301 (Sept. 29) 1922.
2. Chesney, A. M., and Kemp, J. E.: J. Exper. Med. **42**: 17 (July) 1925.
3. Chesney, A. M.: Medicine **5**: 463 (Nov.) 1926.
4. Neisser, A.: Arb. a. d. k. Gsndhtsamte. **37**: 1, 1911.
5. Nichols, H. J., and Walker, J. E.: J. Exper. Med. **37**: 525 (April) 1923.

clinical experience of many years and should be adhered to. But their theory is ingenious.

More recently, Kolle [6] suggested that man probably does acquire true immunity in the course of an attack of syphilis. With present day knowledge of syphilitic therapy widely disseminated, he believes that patients are usually treated early and cured. But these patients probably continue to expose themselves to syphilis, and the fact that reinfection remains rare suggests that those who once had the infection became immune.

Current Comment

SAFEGUARD THE HOSPITAL STAFFS

The tremendous increase in medical knowledge during the last few decades has revolutionized the methods of dealing with disease. Many of the new methods are of great benefit to mankind but may also be dangerous, depending on whether they are employed by skilled or unskilled practitioners. Twenty-five years ago most graduates of medical schools entered immediately on the practice of medicine without instruction in the actual care of patients such as they now obtain during the last two years of their medical course and the one or more years of intern training. That accidents or serious results from inexperience seldom occurred was largely due to the fact that such technical and dangerous methods of treatment as are now commonly employed had not come into general use. Serums, antitoxins, insulin and other like preparations, as well as the roentgen ray or radium, which are now being extensively used, had not been developed. To use these modern helps in medical practice requires, more than ever before, that physicians or others using them shall not only have obtained a complete training in the sciences fundamental to medicine but also, by means of clinics in dispensaries and hospitals, have developed skill in examining patients, in making accurate diagnoses, and in applying the particular form of treatment in each case which the condition of the patient indicates. Partly because of these many valuable helps in combating disease, hospitals have become more essential in the practice of medicine. Hospitals have now reached a higher standard of development than ever before attained, but there are still further heights to which they may climb in their service to humanity. This further progress depends more on the intelligence, skill and high ideals of the physicians on the attending staff than on all other factors combined. It is of first importance, therefore, in the future of hospitals in this country, that no influence, either from within or without, shall be permitted to interfere with the high educational and moral standard by which hospital staffs are so generally selected. Hospital directors or trustees are morally, if not legally, responsible for the maintenance of such staffs, a responsibility that has been recognized by the courts in every instance in which their right to remove from or to refuse admission to the staff has been questioned.

6. Kolle, W.: Deutsche med. Wchnschr. **52**: 11 (Jan. 1) 1926.

Association News

FUNDS AVAILABLE FOR GRANTS TO AID SCIENTIFIC RESEARCH

The Committee on Scientific Research of the American Medical Association has funds available for grants of small sums to aid scientific research. Applications for such grants may be made by addressing the Director, Committee on Scientific Research, 535 North Dearborn Street, Chicago.

ANNUAL CONGRESS ON MEDICAL EDUCATION, MEDICAL LICENSURE AND HOSPITALS

Held in Chicago, Feb. 14, 15 and 16, 1927

(Continued from page 734)

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

FEBRUARY 14—AFTERNOON

Teaching of Clinical Work to the Undergraduate
DR. EVARTS GRAHAM, St. Louis.

Medical Education for the General Practitioner
DR. WILLIAM J. MAYO, Rochester, Minn.

The Place of Preventive Medicine in a Medical School
DR. WALTER S. LEATHERS, Nashville, Tenn.

These three articles will appear in an early issue of THE JOURNAL.

Survey of Medical Education

DR. W. C. RAPPLEYE, New Haven, Conn.: We started out on the assumption that medical education is concerned with the qualifications and preparations of students to practice medicine. We know that about 93 per cent of all men and women who graduate in medicine continue in clinical medicine in one form or another. We have put most of our attention so far on the basic course. We have not touched in an official way graduate medical education or continuation courses, and other problems that fall into our work. As a second function, the idea has been to formulate a foundation training which would be adequate for a man or woman who is going on into graduate work in specialties, public health work and research, or other fields that are essentially graduate training. As a third function, we have hoped to lay the foundation of training for the self-education of the practitioner as he continues his life work. In our report we have touched on graduate extension training, the continuation course, the opportunities for training men already in practice, distribution of physical and health services, cost of medical service, availability, and other matters of general character. We have recognized that the character of medical practice is changing. Public health agencies, economic problems, hospitals, clinics, nurses, the automobile, telephone, roads and other factors are modifying medical practice. Those changes ought to be reflected in medical teaching.

We decided that the first thing to do was to learn what the demands for medical service are, and to distinguish between the need and demand regardless of whether the need is being met. We secured the cooperation of more than 500 general practitioners who graduated in the classes of 1915 to 1922, inclusive, who are doing general practice in twenty-six states. Analyzing 20,000 visits, we learned that 55 per cent were in the office; 35 per cent were in the home, and 10 per cent were in the hospital. Seventy-five per cent of the office visits were for minor surgery, upper respiratory infections, and general medical and venereal disease. In home practice, 90 per cent of the calls were due to respiratory infections, general medical and contagious diseases, obstetrics and minor surgery. In the hospitals, 55 per cent of the work was surgery, 30 per cent medical and 15 per cent obstetrics. We compared this study with the conditions under the national health insurance act of Great Britain. We were able to get a sample of 993 records. The similarity between the figures we obtained and the figures they obtained is quite striking.

We analyzed 5,400,000 clinic visits made in fourteen large cities, and 264 clinics reported to the New York state board. Among other interesting things, we found that between 10 and 15 per cent of the population of the larger cities were receiving all or part of their ambulatory attention in the outpatient department. That represents between 25 and 30 per cent of the sick. We then compared the cause of absenteeism in industry with the demands on general practitioners, and found that the ten to fifteen most common causes of absenteeism in industry correspond almost exactly with 85 per cent of the demands on general practitioners. We discovered the same thing that Strickler reported in his study of morbidity in the general population group of Hagerstown. He found that 11 per cent of the cases reported were diseases against which public health efforts are being directed. We found that less than 10 per cent of the diagnoses reported by the physicians whose practice we have sampled were public health diseases. In other words, more than 90 per cent of the problems of the general practitioners are the problems of individual patients. Control on the part of public health efforts of many of the communicable diseases is shifting the type of medical practice to a larger and larger proportion of individual health problems. It again emphasizes what has been emphasized today, the exceedingly important part the general practitioner is to play in preventive medicine.

To get at the needs of medical service, we have made a study of the figures on drafted men reported by the Surgeon General. We have classified the 269 defects found and have tried to correlate them with some figures we have secured from other sources. We were particularly interested in the causes of rejection. The large causes were physical development, diseases of the heart and mental diseases.

It is quite interesting that in the large cities anywhere from 50 to 75 per cent of the patients cared for in the hospitals are in the wards, where the patient does not pay a fee to the physician for that care.

We also considered the question of the supply of physicians. We took eighty-eight schools in Canada and the United States. Ninety-five per cent of the students are in the sixty-four class A schools. There seems to be general agreement that we have enough physicians at the present time, but the problem is that of distribution. At present, students graduate at just less than 27 years of age and begin to practice at about 28 years of age, on the average. The medical schools are producing approximately 4,000 graduates a year. On the basis of an assumed retiring age of 65, by 1962 there will be 160,000 physicians. The interesting thing is that at no time in the future are we going to retain the present ratio. That is due to the constantly rising age levels, which will throw the large number of men over 65 years into the next ten or fifteen years. We combined the survival with the increasing new generation of physicians and built up a new decade from 1925 up to 1965. It is interesting that 1945 will see the lowest number of physicians in the United States, according to these figures. We will then reach 15,000 less than we now have. We think that 5.7 per cent of graduates in medicine do not remain in medicine. They may go into public health administration, insurance medicine, missionary fields, and so on. The foreign schools are now supplying about 7 per cent of the medical practitioners in the country. Those two figures offset each other almost exactly. At present there is one physician under 65 to every 981 persons. In 1955, the ratio on the basis of our graduating 4,000 men beginning practice at 28 will be one physician to 1,305. In 1965 it will be one to 1,200. To insure anything like one physician to 1,000 persons, it is necessary to graduate approximately 4,800 men each year to begin practice at 26, or 5,000 to begin at 28.

There has been a great deal of comment by general educators on the necessity and wisdom of shortening elementary and secondary education. Several states are now cutting down the time from eight to seven years, and a number are attempting to cut down the college periods. We may see results in getting students into medicine younger.

We also secured many criticisms from men in general practice throughout the country. Some are directed against the laboratory sciences. They feel that the basic courses have not been presented to them in the light that would give them understanding of the sciences themselves, particularly against the redundant laboratory work. There is a great deal of criticism against the intern period, to the effect that the student is not receiving instruction, and is not getting what he ought to get out of it. That also applies to the clinical work in the last two years of the medical course, when there is so much study of rare diseases and too much emphasis on research.

We also inquired about facilities for study. There are inadequate hospital facilities scattered throughout the smaller communities. A great many communities are without reasonable facilities for medical practice. That applies to nursing, and laboratory and consulting services, and other matters of that kind.

The Outpatient Clinic and the Problem of Instruction in Clinical Medicine

DR. GEORGE SHAMBAUGH, Chicago: Outpatient dispensary work in this country has in many respects not kept abreast with the development in hospital work. Too often the outpatient clinic has been allowed to carry on in surroundings and with an equipment which at best is a very poor makeshift and which would not be tolerated in the hospital. Above all else, the work in the outpatient clinic suffers in comparison with work in the hospital because of its inadequate medical personnel. As long as the practice is permitted to continue whereby those who take the responsibility of caring for the work in the outpatient clinic are not permitted the privilege of following the care of the patients who are referred to the hospital, it can hardly be expected that the loyalty and enthusiasm of the dispensary staff can be retained for any length of time. Another factor in the organization of dispensary work that has been responsible for the poor showing in dispensary practice as compared with hospital practice is the failure to develop a corps of graduate student assistants to take the place in the outpatient clinic that hospital interns take in the scheme of hospital work.

There is an increasing demand for graduate training in clinical medicine from men who desire preparation for entering the practice of one of the specialties. A plan has not been evolved whereby such men are able to secure proper training. With the rapidly increasing tendency toward restricting practice to special fields, this may properly be considered the chief problem in medical education today.

Departments of clinical medicine working under the auspices of universities should be expected to meet the obligation which an affiliation with the university puts on them of making work in their departments conform, in general, with the ideals underlying the work in other departments of the university. The physician who takes an interest in the problems of medical education should find a much greater interest in assisting in this work of preparing men for special practice than could come from participating in the more elementary work of teaching undergraduate medical students.

The outpatient clinic is the place where most of the problems in clinical medicine are first encountered. It is therefore the one place where advanced clinical training for the first or fundamental year in preparation for special practice can best be provided. The key to proper clinical instruction in any special field is to make the student an actual clinical assistant who shares, so far as his training and abilities permit, in the responsibility of the work of the department. It is essential for the development of efficient service in the outpatient clinic that it be provided with a suitable corps of graduate students serving as clinical assistants, comparable to the services of interns in the hospital. Graduate students taken into a department as clinical assistants must be an actual asset. A clinical department of medicine will succeed in providing efficient graduate training only by concentrating its attention on developing the most efficient service for the patient. Ideal service for a patient spells ideal clinical training for the graduate student who participates in providing this service. Naturally, the carrying out of such a program means that the outpatient clinic must be properly housed and provided with an equipment that represents as nearly as possible an ideal equipment. The staff for directing the work should include men imbued with the spirit of investigation, in order that they may instil this spirit in the graduate

students and help them to pursue by the methods of research the clinical problems that are constantly presenting.

In the outpatient clinic at Rush Medical College, the department of otolaryngology set out, seven years ago, to rehabilitate this work. First we provided an equipment which we aimed to make as nearly as possible an ideal equipment for doing the work. Next, we worked out an arrangement whereby those patients requiring hospital care could be admitted to the Presbyterian Hospital, and their hospital treatment was followed up by the same men who were taking care of them in the dispensary. We solved the problem of providing better service for the patient by making the outpatient clinic a desirable place for graduate students by supervising and directing the work so as to make this a valuable center for obtaining clinical training in otolaryngology. At the same time, we worked out the details of a program whereby the graduate students during the half of each day not spent in the outpatient clinic are at work in the laboratories of the University of Chicago completing their knowledge of the fundamental sciences, for work of this sort occupies as important a rôle in graduate training as it does in undergraduate medical study. We require of these men a minimum of one year's full-time service. We were guided in deciding the number of assistants by the requirements of the clinic, taking on only the number of graduate students necessary to provide the best possible care for the patient. The second year we employed four full-time assistants; the third year we doubled this number, taking on two each quarter, and last year we found it necessary to increase the number to twelve; that is, taking on three each quarter. These men stay with us one year and are in addition to our permanent staff who direct and supervise the work. Our effort to rehabilitate the work in the outpatient clinic has had several striking results. In the first place, for the first time since I have been connected with the dispensary, more than twenty-nine years, we now find the patients receiving something like adequate attention. In the second place, the permanent staff are finding their work in the dispensary more interesting than ever before. The graduate students, by relieving them of the many details which make for efficiency and which the permanent staff had never been able to care for properly, have made it possible for these members of the staff to devote more time to the study of those unusual cases which are of special interest to the clinician.

In the third place, the instruction for undergraduates in the department has been enhanced just so far as the character of our work has been improved. The introduction of graduate students as clinical assistants in the department has proved a most valuable asset for the patient and the staff as well as for the undergraduate student, and, incidentally, we have solved the most difficult problem connected with preparation for practice in any special field; namely, the problem of providing in a satisfactory manner that work which is essential for the first or fundamental year's training for special practice.

DISCUSSION ON PAPERS OF DRS. GRAHAM, MAYO, LEATHERS, RAPPLEYE AND SHAMBAUGH

DR. WILLIAM ALLEN PUSEY, Chicago: It is interesting to find how very closely I agree with Dr. Graham on the fundamentals. I am entirely in accord with him that medical education should be largely groundwork; that it should consist in giving the student the fundamental stuff of education, and in getting him ready to complete his education as he goes on. There were certain things in Dr. Graham's address that we differ on. For example, I am unable to see the relationship of the improved condition of morbidity in the country to present medical education. I think it is due rather to the increase in our knowledge of the causes of disease than anything that has been done by our graduates of the last fifteen years under the new conditions of medical education. On the question that the country is getting as good medical service as it ever did, I am reminded of the fact that for the first time in the history of this country infant mortality in the country went above that in the cities in 1921. The explanation of that was the inadequacy of rural medical service. I call attention to another fact as to whether rural medical service is as good as it used to be, and that is the enormous development of rural obstetrics in the hands of midwives. That is a new development, and it speaks volumes for the changes that are going on in present rural medical service. I think the difference between Dr. Graham and me is that we are looking on different sides of the same field. He has in mind the preparation of physicians and surgeons and the young medical men who practice in his hospital in St. Louis. I have in mind the furnishing of physicians to the country as a whole. I want to see medical service for the man at the head of the household. I am not interested in the maximum requirements for medical education. I am interested in the minimum requirements. I am perfectly willing to turn over the state of Rhode Island, which does not have a rural district and therefore a rural problem, to the modern Rockefeller type of medical school, but I would like to give a chance to the rest of the country to produce physicians for the treatment of the sick. I do not want obstetrics in the rural districts turned over to midwives. I do not believe it can be handled adequately and satisfactorily in this country by a few medical centers. The place where Dr. Graham and I differ is this: In my opinion we have to keep our feet on the ground and remember that life is about seventy years on an average. As Flexner said fifteen years ago, we have to keep in mind the production of a graduate who under economic and social conditions is distributive. Further, I am firmly of the opinion that giving medical education on the basis of such fundamentals as Dr. Graham so wisely indicates can be done in a much shorter time than it is being done now. I entirely agree with Dr. Shambaugh's plan of developing his specialist as an assistant. That is the only way to make specialists in my line. We have, I think, solved that question very well in this country by the establishment of a few centers of such instruction as Dr. Shambaugh outlines; centers like the University of Pennsylvania and the University of Michigan, and a few others. There is one point on which I differ from Dr. Shambaugh and which bears on this question of education. I am not interested in research as a means of education for the average man. I am interested in masters preparing for special careers. I believe that a man preparing for the ordinary routine of life does not need the inspiration of a great master for that sort of career. I think rather he needs the direction of a good teacher.

(To be continued)

Juvenile Employment.—An investigation is reported into the personal circumstances and industrial history of 6,032 juveniles, being 10 per cent of those registered for employment on July 13, 1925, in England, Scotland and Wales. The time chosen was one when a long spell of trade depression was claimed to be creating a rising generation of unemployed, and, for that reason, of unemployable persons. The sample chosen is probably largely representative of the whole unemployed body of boys and girls at that date; 28 per cent were under 16, and 72 per cent over 16; 70 per cent were of good physique, 84 per cent in good health; only 5.5 per cent were of poor physique, and 2 per cent in poor health. The great majority had attained at least Standard VI before leaving school; more than half obtained work within one month of leaving; and over half the situations were obtained unaided, while only 12.4 per cent were obtained through employment exchange or bureau. About two thirds of the juveniles had held their first post for more than six months, a fact which is against the idea that situations are left for sheer love of change. In general the worse the physique, health or appearance, the longer was the average period of unemployment; a boy of poor physique being unemployed twice as long as one with good physique. No evidence was found of a large class verging on the unemployable in consequence of long-continued unemployment. A significant fact is the unsatisfactory character of much of the employment, which offered few or no prospects of training for a definite occupation; only 5 per cent of first situations were apprenticeships, while of apprenticeships only 13 per cent were documentary, the remainder being verbal understandings or trade practice.—Report of Ministry of Labor, London, 1926; Abstr. *Bull. Hyg.*, December, 1926.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ARIZONA

Bill Introduced.—Senate bill 102 would require a report on occupational diseases.

CALIFORNIA

Health at San Diego.—Telegraphic reports to the department of commerce from sixty-seven cities with a total population of about 30 million, for the week ending February 26, indicate that the highest mortality rate (23.1) was for San Diego, and that the mortality rate for the group of cities was 13.9. The mortality rate for San Diego for the corresponding week last year was 25.6, and for the group of cities, 15.8.

Society News.—The Los Angeles County Medical Association held a joint meeting with the obstetric section, March 3, at which Dr. Sterling N. Pierce discussed "Low Cesarean Section," and Dr. John C. Irwin, "Rubin Test in Sterility." ——The Los Angeles Surgical Society held a symposium on new growths in the intestinal tract, March 11; papers were read by Drs. Maurice G. Kahn, Rea E. Smith, William B. Bowman and Ray A. Carter. —— Dr. Egbert E. Moody addressed the Los Angeles Pediatric Society, March 2, on "Acrodynia: Report of Case."

Medicodental Building at San Diego. — The new medicodental building being constructed at Third and A streets, San Diego, as a home for the medical and dental professions is expected to be ready for occupancy by June. It is a reinforced concrete building with a terra cotta and face brick exterior, and marble lobby and corridors; all offices are outside offices with built-in conveniences such as special roentgen-ray wiring, compressed air, forced ventilation, electric outlets for power and lighting, properly placed gas outlets and a water-softening plant. An entire wing on the fourteenth floor has been planned for the medical library. A garage sufficient to accommodate both tenants and clientele has been built in connection with the building, so that one can drive directly into the garage, leave his car and enter the elevator lobby. The building is on high ground just outside the congested area, and affords an unexcelled view of the surrounding community and the ocean.

CONNECTICUT

Towns Without Physicians. — About 30 per cent of the towns in Connecticut do not have physicians, according to a study made by the state department of health. Among the towns under a population of 1,000 there is said to be an 80 per cent shortage of physicians. There are only five physicians in the state under 25 years of age, and they are in cities of more than 25,000 population. The older physicians, those of about 65 years of age, are for the most part practicing in towns ranging from a population of 4,000 to 25,000. The thirty-two physicians over 80 years of age are in two of the largest cities. In the age group 25-29, the physicians are fairly well distributed in towns of all populations.

Dr. Moriarity Arrested by His Chauffeur.—Dr. Edward H. Moriarity, Grand Rapids, Mich., was arrested in Hartford, February 17, by state policemen, on a charge of practicing medicine without a license. Moriarity, it is reported, had a number of patients in Hartford County whom he was treating for cancer by means of his "discovery," for about $150 a cure. He is said to have gone east in a Lincoln sedan, arriving at New Britain about February 6, where his activities attracted the attention of health authorities. Policeman Webber of Middletown, who hired out to drive the doctor's car, assisted in making the arrest. Moriarity graduated from the Grand Rapids Medical College in 1906 and was licensed in Michigan; he apparently failed at the state board examination in Massachusetts in 1923, and also in Connecticut; and a bill was introduced in the Connecticut legislature in 1923 to authorize him to practice by special legislation; the bill, however, failed to pass. In 1922, a Dr. Edward H. Moriarity advertised a cancer cure in the Rockville (Conn.) *Leader,* stating that he intended to make the village his headquarters. A later report states that Dr. Moriarity was convicted in the police court, and that he withdrew his appeal to the superior court, and paid the fine of $200 and costs.

DELAWARE

Bills Introduced. — Senate bills 72 and 83 would allow physicians to prescribe liquor by complying with certain requirements.

GEORGIA

Society News. — The clinic conducted at the Patterson Hospital, Cuthbert, February 3, before the Randolph County Medical Society was one of a series held throughout the state under the auspices of the alumni of the University of Georgia Medical Department; it was conducted by Drs. William A. Mulherin, William J. Cranston and Henry M. Michel, of the faculty.——Dr. Keith C. Rice addressed the Medical Journal Club of Atlanta at the Academy of Medicine, February 23, on "Intestinal Surgery," and Dr. Lawson Thornton on "Orthopedic Surgery."

IDAHO

Bill Introduced.—House bill 300 would provide for the establishment of a state hospital for the care and treatment of persons having tuberculosis.

ILLINOIS

Bill Introduced.—Senate bill 131 waives requirements of instructions for chiropractors.

County Sanatorium Still on Jacks.—The Madison County Tuberculosis Sanatorium is still standing on jacks; there has been a very slight subsidence of the building in the last month, only seven-eighths inch at one station, and one-eighth at another. Thirty-seven patients are under treatment in the sanatorium (THE JOURNAL, January 1, p. 36).

Society News.—Dr. Jerome R. Head, instructor in surgery, and Dr. Carl A. Hedblom, professor and head of the department of surgery, University of Illinois College of Medicine, Chicago, addressed the Winnebago County Medical Society, March 1, Rockford, on "Use of Lipiodol in Thoracic Surgery" and "Differential Diagnosis and Treatment of Acute Abdominal Lesions," respectively.

Chicago

Personal.—Dr. Hugh O. Jones has been promoted to the post of assistant commissioner of health to take the place of Dr. J. C. Geiger, who was made executive assistant to the commissioner of health.

Twenty-One Liquor Licenses Revoked.—The district prohibition administrator, Mr. E. C. Yellowley, during the last week revoked the liquor licenses of twenty-one physicians. The following list contains the names of those whose permits were revoked following a hearing; the others, according to the Chicago *Daily News,* consented to revocation without a hearing in order that their names should not be published.

Dr. Frank S. Davidson, inaccurate records; issued prescriptions with fictitious names and addresses; conspiracy.
Dr. Frances E. Haines, fictitious names and addresses of patients prescribed for.
Dr. Eli Levin, respondent defaulted at hearing; not in active practice at address designated in permit.
Dr. Jacob M. Mora, inaccurate records; issued prescriptions with fictitious names and addresses; diversion; conspiracy.
Dr. Harry G. Rand, failed to keep accurate records.
Dr. George A. M. Webster, illegal disposition of whisky prescriptions.

Medical and Dental Arts Club.—At the annual meeting of the Medical and Dental Arts Club, February 15, the members approved the action of the board of governors during the year and authorized incorporation and issuance of stock. The building at 53 East Lake Street will be ready for occupancy, May 15; a temporary office for the secretary has already been provided in the building. Drs. Jeremiah H. Walsh, William Allen Pusey and M. M. Printz, D.D.S., were elected members of the board of governors to hold office until

1930, and Drs. John S. Nagel, John H. Cadmus, D.D.S., Harry B. Pinney, D.D.S., and Frederick R. Green were elected president, vice president, treasurer and secretary, respectively, to hold office until the annual meeting in 1928. Arrangements have been made with a number of leading local professional organizations to have permanent quarters in the building.

Society News.—Dr. Frederick Tice addressed the Chicago Medical Society, March 9, on "Syphilis—Modern Medical Viewpoint"; Dr. Findley D. John gave a preliminary report on "Radium Salts in Systemic Infections, and Case Reports on Ulcers of the Stomach and Duodenum, Myocarditis, Endocarditis and Arthritis." Dr. Dean Lewis, Baltimore, will be the guest of the society, March 23.——Members of the staff of the Municipal Tuberculosis Sanitarium reported on the work done by the staff in the study of intestinal tuberculosis before the Chicago Roentgen Society, March 10; Dr. Karl J. Henrichensen discussed the clinical aspect; Dr. Carroll E. Cook, the roentgenologic data, and Dr. Henry C. Sweany the pathologic conditions.—Dr. Lawrence H. Mayers addressed the Chicago Society of Industrial Medicine and Surgery, March 7, on "Indications for and Methods of Administration of Foreign Protein," and Dr. Sydney Walker, Jr., "Industrial Eye Injuries."——The Chicago Medical Society and the Chicago Urological Society will hold a joint meeting, March 16, at the Marshall Field Annex Building; Carl R. Moore, Ph.D., and Lincoln V. Domm, A.B., both of the University of Chicago, will speak on "The Mammalian Testis; Cryptorchidism Vasectomy; Transplantation; Heat Sterility, and Scrotal Function" and "Effects of Ovariotomy in the Fowl and Its Bearing on the Problem of Sex Inversion," respectively; Drs. Herman L. Kretschmer and Robert H. Herbst will give a urologic clinic at the Presbyterian Hospital at 9 a. m., March 16.——Among others, Dr. B. H. Moore addressed the Chicago Orthopedic Club, March 11, on "Relation of Bone and Joint Pathology to the Roentgenogram," and Dr. Philip Lewin on "Osteochondritis Deformans Juvenilis of the Shoulder."

Institute of Medicine of Chicago.—Dr. Elliott C. Cutler, Western Reserve University School of Medicine, Cleveland, gave the third Lewis Linn McArthur Lecture of the Billings Foundation before the Institute of Medicine of Chicago, February 25, on "Postoperative Abscess of the Lung: Experimental and Clinical Studies"; the members of the Chicago Surgical Society were guests at this meeting. The former lectures of the Billings Foundation were delivered by Drs. Robert Emmett Farr of the University of Minnesota, Minneapolis, and Evarts A. Graham, Washington University School of Medicine, St. Louis. The institute will hold a joint meeting with the Chicago Gynecological Society, April 11; Dr. Herbert M. Evans, University of California Medical School, will speak on "Relation of Nutrition to Fertility"; Edward A. Doisy, Ph.D., St. Louis University School of Medicine, "The Ovarian Hormone: Biochemical Studies," and Edgar Allen, Ph.D., University of Missouri School of Medicine, "The Ovarian Hormone: Morphologic and Physiologic Studies." There will be a joint meeting with the Chicago Medical Society and the Chicago Tuberculosis Society, April 13; Dr. Allen K. Krause, Johns Hopkins University Medical School, Baltimore, will present the program. The April 22 meeting of the institute will be devoted to the presentation of work by Chicago investigators. There will be a joint meeting of the Society of Medical History of Chicago and the Institute of Medicine, March 18, 8 p. m., at the City Club; Dr. David J. Davis will give an illustrated lecture on "The Quakers in Medicine"; Chauncey Leake, Madison, Wis., will give an illustrated lecture on "Medical Caricature in the United States"; Dr. Richard Dewey, San Francisco, Calif., on "The Care of the Insane in Illinois," and Dr. Benjamin Barker Beeson, "Jean Martin Charcot: A Summary of His Life and Works." Those desiring to be present at the dinner at 6:30 should notify Dr. Morris Fishbein, the secretary, by Thursday morning, March 17.

INDIANA

Bill Introduced.—Senate bill 158 would establish a hospital for the treatment of incipient pulmonary tuberculosis.

Personal.—Dr. Edison K. Westhafer, New Castle, has accepted a position with the U. S. Public Health Service, it is reported, and has been temporarily assigned to the marine hospital in New York.——Dr. John G. Huber, Evansville, has been appointed county health officer to succeed the late Dr. Benoni S. Rose.

IOWA

Personal.—Dr. Lee E. Shafer has been appointed president of the staff of St. Luke's Hospital, Davenport, to succeed Dr. William L. Allen, who held that position for many years.——Dr. Andrew A. Robertson, city health officer of Council Bluffs, has been appointed a member of the state board of health.

Bills Introduced.—House bill 159 would protect the public from infection by persons with tuberculosis. Senate bill 158 would regulate the practice of cosmetology and provide for the examination and licensing of practitioners thereof. Senate bill 229 would require the superintendent of public hospitals to forward tissues removed at any surgical operation to the pathologic laboratory of the state university for a diagnosis and report.

KANSAS

Bill Introduced.—House bill 572 would provide for the financing and equipping of city hospitals.

KENTUCKY

Change of Place of Meeting.—The council of the Kentucky State Medical Association has changed the place of the next annual meeting of the association to Owensboro, October 3-6; Dr. John W. Scott, Lexington, of the committee on scientific work, will arrange the program.

Personal.—Dr. J. C. Hart has been elected health officer of the city of Paris to succeed the late Dr. Silas Evans.——Dr. George J. Hermann, Newport, has been appointed a member of the board of trustees of Speers Memorial Hospital, Dayton, Ky., to succeed the late Dr. James O. Jenkins.——The Clark County Medical Society presented a silver loving cup to Dr. John A. Snowden, Sr., in February, in recognition of his many years in the practice of medicine.

MARYLAND

Bill Introduced.—House bill 257 would provide that in certain cases, insane veterans of the World War may be cared for by the U. S. Veterans' Bureau.

Children Examined by the State.—Nearly 36,000 children were examined physically, during 1926, under the direction of the state department of health. The examinations were made to check up on their health and to point out conditions that could be improved or corrected by their family physicians. One out of every seven of the children examined from 5 to 7 years of age was free from any condition needing correction; 54 per cent of them needed dental care; 43 per cent had "unhealthy tonsils"; 16 per cent had adenoids, and 4 per cent bone trouble due to rickets.

Personal.—Dr. Ralph G. Beachley will succeed Dr. Joseph P. Franklin as deputy state health officer for Cecil, Kent and Queen Anne counties. Dr. Franklin, after several years' service, goes to Baltimore as chief of the bureau of communicable diseases.——Dr. Frederick H. Vinup, Baltimore, has been appointed by the governor a member of the board of welfare; Dr. Frank J. Powers, Baltimore, has been appointed to the board of directors of the Hospital for Consumptives of Maryland, and Dr. John Charles Macgill, Catonsville, has been appointed to the board of managers of Spring Grove State Hospital.——Dr. Vladimir Fortunato, sculptor of Johns Hopkins University School of Medicine, has been awarded the gold medal by the U. S. Treasury Department for life-like vaccination models showing types of reactions in smallpox vaccination.

Hospital for Negroes.—The first modern hospital in Baltimore for negroes will be the new Provident Hospital and Free Dispensary, formerly the Union Protestant Infirmary, work on which will begin shortly. It will be controlled by an advisory board of fifteen white men and women, a consulting staff of white physicians, nominated by the faculties of Johns Hopkins Medical School and the University of Maryland, and a board of twelve colored trustees. The entire visiting staff of the hospital will be negro physicians. The hospital will be the outgrowth of the Provident Hospital, which was started thirty-two years ago. The building will be remodeled and renovated at an expense of more than $60,000, with four operating rooms, seventy-five private rooms and wards for seventy-five patients. Surgeons from Johns Hopkins Medical School or from the University of Maryland will conduct clinics daily for the benefit of the visiting staff; a nurses' school will be operated in connection with the hospital. The institution will receive aid from the state and from the city of Baltimore, and contributions from the community fund.

MICHIGAN

Bill Introduced.—House bill 202 would allow the state to manufacture antitoxin.

Society News.—Dr. Joseph L. DeCourcy, Cincinnati, was invited to discuss the paper read by Dr. Clifton F. McClintic on "Local Anesthesia," before the Wayne County Medical Society, Detroit, March 1.

MINNESOTA

Bills Introduced.—Senate bill 237 and house bill 443 would regulate the admission of patients to the state sanatorium for consumptives. Senate bill 369 provides for the erection and maintenance of a hospital for the criminally insane. Senate bill 665 and house bill 720 regulate the licensing of physicians without examination.

Railway Surgeons' Meeting.—The eighteenth annual meeting of the Minneapolis, St. Paul and Sault Ste. Marie Railway Surgical Association was held, February 25-26, at the Radisson Hotel, Minneapolis. Dr. Arthur A. Law gave the presidential address on "Surgery of Autografts"; Dr. Frank G. Connell, Oshkosh, addressed the dinner meeting on "Hernia, with Especial Reference to the Internal Ring; Henry S. Mitchell, general counsel, Minneapolis, also gave an address. Dr. Karl W. Doege, Marshfield, Wis., was elected president for 1927; Dr. David J. Twohig, Fond du Lac, Wis., vice president, and Dr. John H. Rishmiller, Minneapolis, secretary-treasurer.

MISSOURI

Bills Introduced.—Senate bill 400 would require a permit from the state food and drug commissioner before any person can deal in drugs or nonintoxicating beverages. Senate bill 402 provides that owners of pharmacies, drug stores, etc., shall obtain drug store permits from the state board of pharmacy. Senate bill 371 and house bill 652 would provide that hereafter no persons shall be eligible to the office of coroner who are not registered and licensed practitioners of the science of medicine and surgery, under the laws of this state.

MONTANA

Bills Introduced.—House bill 177 would provide for the furnishing of medical attendance by the county board, and would authorize the employment of county health officers. House bill 193 would include the drug cannabis indica in the list of prohibitive drugs.

NEW JERSEY

Personal.—Dr. Louis Hollander will become superintendent of the Nathan and Miriam Barnert Memorial Hospital, Paterson, March 15.——Dr. Alton S. Fell, Trenton, has been elected president of the New Jersey Health Officers Association.

Hospital News.—The chairman of the intern committee of the Atlantic City Hospital, Atlantic City, reported at the annual meeting of the staff, January 21, that more than 200 applications for the position of resident physician had been received, from which number ten will be appointed; Dr. William J. Carrington was elected president of the staff for 1927.

Bills Introduced.—J. R. 10 would provide for a commission to consider the question of state aid for hospitals in which free surgical and medical services are rendered. House bill 233 would define the duties and regulate the records of chief medical examiners, coroners and county morgue keepers. House bill 461 requires one year of college before a student may study osteopathy.

NEW YORK

Infant Mortality at Schenectady.—Telegraphic reports to the U. S. Department of Commerce from sixty-seven cities with a total population of about 30 million, for the week ending February 26, indicate that the highest infant mortality rate (149) was for Schenectady. The infant mortality rate for Schenectady for the year 1925 was 68.

Bills Introduced.—Senate bill 951 would require the county jail physician to ascertain whether persons committed to jail are suffering from contagious or communicable diseases. House bill 1428 provides for the regulation by the state health commissioner of the use of roentgen-ray machines and laboratories. House bill 1442 provides that the court may order a World War veteran to be committed to a United States Veterans' hospital in case such a veteran is found to be insane. House bill 1462 would regulate the manufacture, sale, transportation and possession of distilled spirits. House bill 1332 would amend the workmen's compensation act by adding to the list of occupational diseases any and all disabling diseases and disabling illnesses. House bill 1334 amends the workmen's compensation law by providing that an injured employee shall be entitled to recover reasonable amounts spent by him for medical attendance.

Society News.—Dr. George V. Dearborn, director, department of medical psychology, U. S. Veterans' Hospital number 81, Kingsbridge Road, addressed the Long Island Psychiatric Society, at Central Islip State Hospital, February 15, on "Mental Deterioration and Regression and a New Method of Determining Them."——Dr. William H. Ross, Brentwood, Long Island, a member of the board of trustees of the state medical society, addressed the Medical Society of the County of Erie, Buffalo, February 28; Dr. Marshall Clinton spoke on "Medical Economics."——The New York Academy of Medicine held a symposium on the study of human beings in relation to disease at its stated meeting, March 3; Dr. George Draper discussed "Studies in the Psychologic Panel of the Human Constitution" and Dr. Louis Hausman, "Types of Morphologic Constitution and Their Significance in Mental Disease"; the tenth lecture in the practical series being given by the academy was on March 11, on "Problems of the First Year" by Dr. Herbert B. Wilcox.——Dr. William Zentmayer, Philadelphia, addressed the Medical Society of the County of Albany, March 8, on "Ocular Angiosclerosis," and Dr. Ross H. Skillern, Philadelphia, on "Intranasal Surgery of the Ethmoid."

New York City

Liquor Licenses Revoked and Reinstated.—The local federal prohibition administrator, during the week ending February 26, revoked the liquor licenses of the following for the reasons indicated:

Dr. Isabelle Blumenthal, irregular prescriptions.
Dr. Nathan S. Brody, irregular prescriptions
Dr. Isidor Caplan, irregular prescriptions.

The liquor license of Dr. Carl C. Salzman, which was revoked January 10, was reinstated, February 24.

Another Convalescent Home.—An agreement was reached in the supreme court at Mineola, L. I., February 21, whereby the summer home of Isaac D. Levy, including 5½ acres of ground and a mansion, was given to St. Joseph's Hospital, Far Rockaway. Negotiations which began in 1925 for the sale of the property ended in an agreement in court whereby it will become a convalescent home and a memorial to the daughter of Mr. and Mrs. Levy.

Seventy-Five Physicians Exhibit Art Work.—The exhibition of physicians' art work now at the Academy of Medicine building comprises about 300 works by seventy-five physicians, including sculpture, painting, oil and water colors, wood carvings and etchings. It is the first exhibition of this kind to be held in this country. Most of the exhibitors reside in New York. There are exhibitions, however, by Drs. Frederick W. Adams, Seattle; Robert Tait McKenzie and Alexander C. Abbot, Philadelphia; Alfred J. Brown, Omaha, and Frederic J. Cotton, Boston.

Personal.—Dr. Ernest H. Gruening recently visited Mexico to obtain additional data for a history of the country.——A testimonial dinner was given by the staff of Unity Hospital, Brooklyn, March 5, in honor of Dr. George I. Miller, chief surgeon; Dr. R. Burton Opitz was toastmaster.——Dr. Byron S. Cane, assistant clinical director, U. S. Veterans' Bureau Hospital, Kingsbridge Road, has resigned to join the staff of the Knickerbocker Hall Sanatorium, Amityville, L. I.——Dr. Hideyo Noguchi, Rockefeller Institute for Medical Research, has been elected an associate member of the French Society of Biology.

Big Milk Dealer's Permit Revoked.—The board of health, following a hearing, February 21, revoked the permit of the Waddington Condensed Milk Company, one of the largest wholesale creameries of the state, to deal in milk or milk products in the city. The action was the result, it is reported, of the seizure by health department inspectors of forty cans of alleged bootleg cream at the company's plant at 102 West Twenty-Fourth Street. The officials of the company were summoned to appear at the hearing. This, the health commissioner is reported to have said, is another step in the drive to prevent the introduction of milk and cream from sources not authorized by the health department.

NORTH CAROLINA

Bill Introduced.—House bill 945 regulates the admission of idiots to hospitals for the insane.

Hospital News.—The trustees of Haywood County Hospital and the architect in charge of construction attended the annual dinner of the Haywood County Medical Society, Waynesville, February 8, and exhibited the plans for the new county hospital. The hospital will be attractively located, fire-proof and modern, and will be supported by taxation; the Duke Foundation will pay part of the operating expenses of its free beds. Dr. J. Rufus McCracken, Waynesville, was elected president of the county society at this meeting.

Large State Appropriation for New National Park.—The state legislature has appropriated $2,000,000 to assist in the purchase of not less than 450,000 acres of mountain forests in the western part of the state and eastern Tennessee, to be presented to the federal government as the Smoky Mountain National Park. Tennessee has also made a liberal appropriation of funds; the additional millions required are to be raised by private subscriptions. In this forest are the fountain heads of numerous streams from which thousands of persons in Tennessee, Georgia, Alabama and the Carolinas receive their water supply. It will be, therefore, of great importance properly to conserve this tract, in which there are also forty mountain peaks, some exceeding 6,000 feet; it is the highest section of the country east of the Rocky Mountains.

Bill to Increase Membership of State Board.—The house has passed a bill increasing the state board of health from nine to fourteen members, four of which are to be appointed by the state medical society and ten by the governor of the state. The present law provides that of the nine members on the board, four are elected by the state medical society and five are appointed by the governor. Our correspondent considers this the first partially successful attempt in the history of the state board to wrest the control of the board completely from the regular medical profession and place it virtually in the hands of the executive. The bill was strenuously pressed by three physician members of the house, and passed with only two dissenting votes, one being cast by the representative from the home county of the president of the state board, and the other by the sole woman member of the house. The North Carolina State Board of Health, one of the oldest, was organized by the state medical society as one of its committees, and was formally created the state board of health by the state legislature in 1877. Beginning, under the law, in 1878, the governor has appointed five members and the state medical society has elected four. The state's organized profession did not offer active opposition to the bill during the operations of the three medical members of the lower house, but when the bill came before the senate, under the leadership of the president of the state medical society, Dr. John Q. Myers, Charlotte, there was effective opposition, by letter, wire and in person. After a conference, the author of the bill, Representative Dr. Carl P. Parker, Seaboard, N. C., expressed regret, and offered to go before the senate committee on health to ask the withdrawal of the bill or its adverse report. This was permitted, and the senate committee submitted an adverse report, thus ending the matter.

OHIO

Bill Introduced.—House bill 122 would provide for a state board of chiropractic examiners.

Personal.—Dr. Wilmer E. Griffith, president of the Butler County Medical Society, has been elected health commissioner of the city of Hamilton.——Dr. Rosco G. Leland has resigned as executive secretary of the Toledo Public Health Association to become assistant to the director of the Bureau of Health and Public Instruction of the American Medical Association at Chicago.——Dr. Ralph R. Harris has resigned from the Cleveland office of the U. S. Veterans' Bureau to engage in private practice in Columbus.——Dr. Emil D. Buhrer has resigned as physician to the Champaign County Children's Home, Urbana, after sixteen years in that position.

OKLAHOMA

New State Health Officer.—Dr. Oliver O. Hammonds, formerly of Okmulgee, has been appointed state health officer to succeed Dr. Carl Puckett.

Antievolution Bill Killed.—The bill which would prohibit the teaching in the state supported schools of any story of creation of man other than that given in the Bible was killed by the house of representatives, February 25, by a vote of 46 to 30.

Bills Introduced.—Senate bill 75 would authorize the State Board of Public Affairs to equip a hospital in Oklahoma City, which would be under the management of the medical department of the state university. House bill 187 regulates the practice of chiropody, and creates a state board of chiropodists.

PENNSYLVANIA

Personal.—Dr. George H. Robinson, Jr., has been appointed health officer of Fayette County to succeed the late Dr. Owen R. Altman.——Dr. Simon M. Skoletsky has been appointed instructor in children's diseases at the University of Pittsburgh Medical School.

Bills Introduced.—House bill 1204 regulates the sale, prescription and possession of drugs. Senate bill 423 would regulate the right to practice naturopathy, and would provide for a board of examiners. House bill 1078 would require certificates from duly licensed optometrists, whenever such certificates may now or hereafter be required as to ocular efficiency.

Another Type of "Doctor."—David B. Blair, Pughtown, was convicted by a jury, February 4, of practicing medicine without a license. Blair, who is said to be an associate minister of the First Spiritual Alliance Church of Pottstown, was accompanied in court by about fifty of his followers. He is said to have prescribed small bits of paper covered with strange signs for patients to attach to their bodies. A witness testified that he had been told to put salt in his shoes and in his bed and to repeat certain passages of the Bible. Blair did not make any charge for his services, but indicated that free will offerings were highly acceptable. The court suspended sentence pending motion for a new trial.

Clinics under State Control.—There are 176 child health centers under the direct supervision of the state health department, and in addition 246 local centers are cooperating with it. The prenatal clinics under state control number ten, and the cooperating clinics, seventy-three. During January, the state health department distributed enough free toxin-antitoxin to immunize almost 18,000 children, forwarded enough tetanus antitoxin to treat 351 persons, and distributed enough silver nitrate capsules to protect the eyes of 1,111 new-born infants. The state department of health's nursing staff, said to be the largest state nursing staff in the country, made nearly 70,000 visits in the last thirty days.

Philadelphia

New College of Pharmacy Building.—The construction of a new three-story, $600,000 building for the Philadelphia College of Pharmacy and Science at Forty-Second, Forty-Third, Woodland and Kingessing avenues will be undertaken at once. The board of trustees of the college has decided to reduce the number of freshmen students for the next session to 250, in the interests of better education.

Society News.—Mr. Abraham Flexner, New York, addressed the Medical History Section, College of Physicians of Philadelphia, February 24, on "The Real Inside History of the Full-Time Movement in Clinical Teaching."——The Philadelphia County Medical Society conducted a clinical night in dermatology and syphilology for the general practitioner, February 23; the speakers were Drs. Jay F. Schamberg, John H. Stokes and Joseph V. Klauder; patients were available for examination by members before the meeting. At the postgraduate seminar, conducted under the auspices of the county medical society, February 25, Dr. Truman G. Schnabel spoke on "Medical Treatment of Peptic Ulcer," and Dr. Moses Behrend on "Surgical Treatment of Peptic Ulcer"; these talks were also arranged in the interest of the general practitioner.——Dr. Frank E. Boston addressed the Philadelphia Academy of Medicine and Allied Sciences, February 21, at the Professional Club, on "Modern Conception of Gallbladder Disease."——Among others, Dr. Bernard J. Alpers addressed the Philadelphia Neurological Society, February 25, on "Lesions of the Epiconus"; Dr. Raymond W. Waggoner, "Encephalography," and Dr. Seymour DeW. Ludlum, "Blood Serum Reactions in Nervous Disorders."——Dr. Philip F. Williams has been elected president of the Obstetrical Society of Philadelphia for 1927.——Dr. Afranio do Amaral addressed the College of Physicians of Philadelphia, March 2, on "Snake Poisoning as Treatment."——Dr. Francis C. Grant addressed the Philadelphia Roentgen-Ray Society, March 3, on "Ventriculography."

TEXAS

Bill Introduced.—Senate bill 429 would prohibit the formation of corporations to operate hospitals and sanatoriums.

Personal.—Dr. Frank E. Gibbons has been elected mayor of McCamey in West Texas, a new city in the oil district, with a population of about 10,000.—Dr. Leopold Kaffie, Corpus Christie, has been appointed county health officer for a term of two years.

WASHINGTON

Bill Introduced.—House bill 345 provides that nonresidents of a county may be admitted to a tuberculosis hospital on payment of a sum to be fixed by the governing board of the hospital.

WEST VIRGINIA

Bills Introduced.—House bill 58 would regulate the manufacture of whisky. House bill 196 regulates the sale of medicines for beverage purposes.

WISCONSIN

Bill Introduced.—House bill 274 provides that a fee shall not be required of physicians for alcohol used in the sterilization of instruments.

Dr. Medlar Resigns.—Dr. Edgar M. Medlar, professor of pathology, University of Wisconsin Medical School, Madison, and assistant professor of pathology at the Wisconsin General Hospital, has resigned, and, according to *Science*, will leave at the end of the present academic year to accept a position with the Mount McGregor Sanitarium in New York.

GENERAL

Federation of State Boards.—At the annual meeting of the Federation of State Medical Boards, Chicago, February 17, Dr. Guy L. Connor, Detroit, was elected president-elect; Dr. Henry M. Fitzhugh, Baltimore, vice president; Dr. Walter L. Bierring, Des Moines, secretary-treasurer. Dr. Byron U. Richards, Providence, R. I., last year's president-elect, succeeds Dr. Samuel W. Welch, Montgomery, Ala., to the presidency.

Number of Liquor Prescriptions Decrease.—The number of liquor prescriptions issued by physicians in 1926 was 12,886,000, while in 1925, the number was 13,463,000. The Washington correspondent of the Chicago *Daily Journal*, viewing the report of the internal revenue bureau, states that the decrease resulted from the surrender by many physicians of their permit to prescribe liquor, and also to closer supervision by the prohibition enforcement bureau. Much of the whisky prescribed is in the states of New York, Pennsylvania, Ohio, Illinois, Missouri, Wisconsin and California. The following states do not have a provision in their state codes for prescribing medicinal whisky: Arizona, Idaho, Maine, New Mexico, North Dakota, Georgia, Kansas, Nebraska, North Carolina, Utah, Washington and West Virginia. Pure alcohol only may be prescribed in Arkansas, Oklahoma, Delaware, Oregon, Florida, South Carolina, Indiana, Tennessee and Mississippi.

Filibuster Smothers Liquor Bill.—The Treasury Department bill to provide for the formation of a corporation to manufacture and supply bonded whisky for medicinal purposes passed the House of Representatives but failed to secure action in the Senate at the session just closed. The failure of this legislation was a disappointment to the Treasury Department which sponsored the measure. It was also approved by the American Medical Association, as shown by the resolution adopted by the House of Delegates in 1922. It is understood that General L. C. Andrews, Assistant Secretary of the Treasury in charge of prohibition, will call a conference soon to discuss the problem that confronts prohibition officials involved in the necessity for immediate replenishment of medical liquor. General Andrews admits that the Treasury Department does not have a complete plan for handling the problem, but that a conference might be helpful to arrange for the replenishment of liquor supplies for medicinal purposes.

Negro Health Week.—National Negro Health Week will be observed, April 3-10, when efforts will be made by state and municipal health departments, voluntary health organizations and other agencies cooperating with the U. S. Public Health Service to improve health and living conditions among negroes. The public health service will issue a bulletin outlining methods of instituting and carrying on the program of the week, designed for schools, fraternal organizations, social welfare societies and other groups, and containing methods for organizing programs, information and sources of material of value for health week work. Sunday will be mobilization day; Monday, home hygiene day; Tuesday, community sanitation day; Wednesday, children's health day; Thursday, educational health day; Friday, special campaign day; Saturday, general clean-up day; Sunday, report and follow-up day. Persons interested in the promotion of this observance can secure copies of the bulletin and other information about the plans by writing to the U. S. Public Health Service, Washington, D. C., or to the headquarters, National Negro Health Week Committee, Tuskegee, Ala.

News of Epidemics.—Schools in Denver and Mexico, Ind., were reported closed, February 1, on account of smallpox; other outbreaks of smallpox were reported between February 18 and 22 at the following places: Shelby County, Tennessee, twenty-eight cases, all confined in a "pest house"; Roosevelt and Quay counties in western Texas; Seminole, Oklahoma, about thirty cases; Washington, Mo., eighty cases, with two deaths in the epidemic which had reached a total of 128 cases.——The state health officer of Michigan reports that smallpox is prevalent in several counties in the state, and that during the first twenty-nine days of January, 164 cases were reported, whereas during the same period in 1925, ninety-three cases were reported.——Epidemics of measles were reported the latter half of February as follows: Sioux City, Iowa, about 100 cases; Evanston, Ill., 125 cases; Davenport, Iowa, about 500 cases; Sheridan County, Fla., 291 cases; Des Moines, Iowa, about 300 cases.——The schools of Mount Vernon, N. Y., were closed about February 18 on account of scarlet fever among the pupils and teachers. There was an outbreak of scarlet fever in epidemic form in Brooklyn, about February 17, of about 120 cases.——Epidemics of mumps have been reported at Antigo, Wis., in Franklin, Pa., with about 150 cases, and in Irving, Ill., and vicinity.——Epidemics of whooping cough were reported during the latter half of February at Winnetka, Ill.; Greensboro, N. C., and in the vicinity of Lexington, Ky.—A widespread epidemic of influenza was reported in the island of Cuba by the Secretary of Sanitation, February 27.

FOREIGN

English Surgeons to Tour America.—The section on surgery of the Royal Society of Medicine of England is arranging a postgraduate tour of the United States and Canada starting, July 23, and including Boston, New Haven, New York, Philadelphia, Baltimore, Washington, Cleveland, Detroit, Ann Arbor, Grand Rapids, Chicago, Rochester, Minn., the Great Lakes, Niagara, Toronto, Ottawa and Montreal. The facilities of the tour on the same terms will be offered to wives of the members, to other fellows of the society who are recommended by the tour committee, and to physicians not fellows of the society, if nominated by two members of the section and approved by the tour committee.

Fund for Unfortunate Physicians.—The representative body of the British Medical Association appointed a charities commission about a year and a half ago to stimulate physicians to support medical charities; a charities trust fund also has been established. In calling attention to this work, the *British Medical Journal* says: "It is distressing to think of the wives and daughters of medical men compelled to eke out their meager incomes by doing the work of charwomen or seamstresses. And while many such cases have been discovered, it is known that there are many others where brave women shoulder their burden alone, too proud and too independent to ask for help." The Royal Medical Benevolent Fund is able to grant only absurdly small sums to relieve such cases. The head office will therefore shortly distribute a circular with suggestions for methods to be pursued by local committees to increase the support of medical charities.

Deaths in Other Countries

E. Leredde, the first to describe blood eosinophilia in Duhring's disease, aged 60.——**Petrini-Galatz,** Roumania, former professor of dermatology, University of Bucharest.——**Luigi Consiglio,** Italian pediatrician, aged 50.——**Joseph E. Adams,** surgeon to St. Thomas' Hospital, London, Dec. 21, 1926, aged 48.——**Leonardo Bianchi,** emeritus professor of nervous and mental diseases, Royal University of Naples, Italy, February 14, aged 79, while addressing an assembly of the Royal Academy of Medicine and Surgery. Dr. Bianchi is the author of a "Text Book of Psychiatry" and "Eugenics, Mental Hygiene and Prophylaxis on Nervous and Mental Disease," which has just been translated into English.

Foreign Letters

LONDON

(From Our Regular Correspondent)

Feb. 18, 1927.

The Lister Centenary

For the centenary of the birth of Lister, April 5, 1927, a celebration is being organized in London. The executive committee consists of representatives of the universities, learned societies and medical bodies. Invitations to send delegates have been addressed to medical institutions in the dominions and abroad. The celebrations, which will take place, April 6 and 7, will include a reception of delegates and the delivery of short addresses, a commemorative service in Westminster Abbey, a reception at the Royal College of Surgeons, a conversazione at the house of the Royal Society, and discourses on Lister as physiologist, pathologist and surgeon.

An Australian Journal Resembling Hygeia

The Federal Committee of the British Medical Association in Australia has decided to publish a journal, comparable to *Hygeia*, containing popular information on health, disease and prophylaxis. Curiously, such a following of the American lead has never been considered in England.

Heavy Fall in Birth Rate

A return issued by the general register office states that the birth rate in England and Wales for 1926 was 0.5 per thousand below that of 1925, and with the exception of the rate in 1918, the last year of the war, was the lowest recorded. The death rate in 1926 was 0.6 per thousand below that recorded in the previous year, and was equal to that of 1923, the lowest recorded rate. The infantile mortality was 5 per thousand births below that of 1925, but 1 per thousand above that of 1923, the lowest on record. The figures are:

	Rate per 1,000 Population — Births	Deaths (Crude Rate)	Deaths Under One Year per 1,000 Births
England and Wales.....	17.8	11.6	70
105 county boroughs and large cities, including London...	18.2	11.6	73
158 smaller cities (populations from 20,000 to 50,000 in 1921).....	17.6	10.6	67
London	17.1	11.6	64

The decline of the birth rate, which has been a feature of British vital statistics since the beginning of the present century, seems to be growing faster. The decline is shown by the fact that thirty years ago the birth rate was almost 30 per thousand. Thirty years before that the rate was about 35. Whereas, therefore, the birth rate fell five points between 1866 and 1896, it has fallen nearly thirteen points between 1896 and 1926. During the last thirty years there has been what is practically a reduction by half. In 1910, the birth rate was still 25 per thousand—only ten points below the figure of 1867. Thus, a rate that had fallen ten points in forty-three years fell subsequently eight points in sixteen years.

Cancer in Monastic Communities: The Question of Diet

The incidence of cancer on members of certain religious orders has been the subject of statistical investigation by Dr. S. Monckton Copeman, F.R.S., and Prof. Major Greenwood, under the auspices of the departmental committee on cancer of the ministry of health. The committee points out that in the many thousands of pages devoted to speculation on the etiology of cancer a large proportion are devoted to indicating dietetic habits. It has been suggested that rich, abundant food, particularly meat, is a cause; that intestinal stasis due to the diet of civilized mankind is the most important factor, and that the increased use of preservatives in the food industries has a bearing on the increase of mortality from cancer. The late Rollo Russell argued that if the constituents of a diet are a cause, we should study the cancer mortality of persons living under conditions which, except in respect of diet, are comparable with those experienced by populations wherein cancer is a large and measurable factor of mortality. In Cistercian and Benedictine monasteries, in which the total number of the votaries over a period of about twenty-six years was 420, he found recorded only one death from cancer, this being attributed by him to the exceptional use of a strong irritant (pepper). The observations of Russell were the starting point of the present inquiry. The dietetic habits of the Carthusians, Benedictines, Cistercians, Carmelites and Dominicans were studied, the two last named not being enclosed orders, and both English and Belgian data were analyzed. The next step was to attempt to obtain an accurate record of the ages and lengths of time under observation of the persons whose risk of dying of cancer it was sought to measure, with the certified causes of death. The ecclesiastical authorities of five religious houses in England and one in Belgium, and the staff of the general register office furnished particulars from which life tables could be compiled, the standard of expected death being taken from the tables of the British Official Annuity Experience.

Analysis of the data supplied proved that fatal cancer occurs in populations abstaining from flesh food, and does not lend support to the contention that among such populations the relative incidence of cancer is low. The low rates of mortality from cancer recorded in prisons and psychopathic hospitals has been the subject of comment, and the authors append some observations. The inmates of prisons and psychopathic hospitals have only one point of resemblance to members of religious orders: they reside in institutions and receive a diet less varied than the general population. In a valuable monograph on the English Convict, the late Charles Goring concluded that cancer was less prevalent among convicts than in the general male population. The present authors agree with this. As to psychopathic hospitals, in the sixty-fifth annual report of commissioners in lunacy, and the tenth annual report of the board of control, it is pointed out that the proportional mortality from cancer in the psychopathic hospital population is much less than in the general population. The authors conclude that an important difference does not exist between the rate of cancer mortality in inmates of psychopathic hospitals and that in the general population. But the fact that, relative to other causes of death, cancer is less frequent in psychopathic hospitals than outside them has led some to suggest that there may be special factors militating against the prevalence of cancer. One such factor is the huge force of mortality exerted by causes either peculiar to the insane, such as general paralysis, or notoriously frequent among them, such as tuberculosis.

Death of Brother Under Anesthetic Administered by Physician

A physician has had the sad experience of seeing his brother die under an anesthetic administered by himself. A well known agriculturist in the Midlands was about to submit to teeth extraction by a dentist at home. The anesthetic was administered by his brother, a member of the Indian Medical Service, but the patient succumbed. At the inquest, the physician said that his brother's heart was quite normal, but when he reached the "struggling state" he threw up his arms. The physician removed the mask and found respiration flagging. Artificial respiration was tried without success. Death, in his opinion, was due to mental and nervous shock

while under the anesthetic. The coroner recorded a verdict of "Death from misadventure," and said he was satisfied that the anesthetic had been properly administered.

The Tuberculosis Campaign

Mr. Neville Chamberlain, minister of health, opened a tuberculosis annex to the Radcliffe Infirmary and County Hospital of Oxford. The building, in a fine situation at Headington, is named the "Osler Pavilion," in memory of the late Sir William Osler, who was regius professor of medicine in Oxford University. Mr. Chamberlain said that the fight against consumption had been conducted with astonishing success, but that there was yet a long way to go. Every year there were 80,000 notifications of tuberculosis in this country, and 40,000 deaths. Nevertheless, rapid progress was being made in the campaign. About 1850, the recorded deaths every year from consumption were about 3,000 per million of population. By 1900, that rate had been brought down to 1,300, and by 1920 to 788. A combination of different factors had produced the improvement—increasing resistance to the disease in the population; the discovery of the tubercle bacillus, which shows how the disease is infectious; the special method of prevention and treatment; the improvement of general sanitary conditions; the rise in the standard of living, and last but not least, the spread of education among the general public as to the dangers of tuberculosis and the way to avoid it. All these must continue to be harnessed together, said the minister, if progress is to continue as in the past.

The Prevention of Cholera Epidemics in India

At a meeting of the Indian section of the Royal Society of Arts, Sir Leonard Rogers, formerly professor of pathology at the Medical College, Calcutta, read a paper on the forecasting and control of cholera epidemics in India, and made suggestions for preventive measures in connection with the forthcoming great Kumbh religious fair, which is held every twelfth year at Hardwar, where the waters of the Ganges debouch to the Indian plains. Sir Leonard Rogers said that Great Britain had a weighty and world-wide responsibility regarding cholera. During the nineteenth century, six great pandemics of cholera spread from India over Europe, and five of them reached America. This might happen again at any time if nothing was done to control the spread in India itself, where severe epidemics continued to occur at irregular intervals. After two years' close study, he had come to the conclusion that the main cholera epidemics in India could be foreseen by attention to the rainfall, absolute humidity, previous incidence of cholera in various areas, and the main pilgrimages. Further, the epidemic areas of the Punjab, Central Provinces, Sind and Gujerat could be protected against cholera epidemics by inoculating their own pilgrims against the disease before they proceeded on pilgrimages to places in the cholera infected areas. The one great outstanding factor in the spread of cholera which could be controlled was the movement of the 20,000,000 pilgrims yearly in India. The numbers to be inoculated in any one district, even in the Kumbh year at Hardwar, would be only a very few thousand, and every dispensary in each district could be utilized for the purpose with a little organization. Every one of the Hardwar Kumbh fairs since 1867, excepting under the good humidity conditions of 1891, had resulted in cholera epidemics in the Western United Provinces and the Punjab. He earnestly appealed to the administrative and sanitary authorities in those provinces not to lose time in protecting the pilgrims by anticholera inoculation in their districts before they proceeded to the Hardwar fair in April.

The Influenza Epidemic

A serious increase in the number of deaths from influenza is recorded. In London and the 105 large cities, the figure for the week ending January 27 was 725. Totals for the previous three weeks were 172, 326 and 470. Not once during the last thirteen years has the annual toll of deaths caused by influenza fallen below 5,000 in England and Wales. Generally the influenza mortality has been far higher, and a total of 267,318 deaths have been due to influenza from 1913 to 1925 (the latest year for which figures are available). The figures for these thirteen years for England and Wales are: 1913, 6,394; 1914, 5,954; 1915, 10,484; 1916, 8,791; 1917, 7,289; 1918, 112,329; 1919, 34,801; 1920, 10,665; 1921, 8,995; 1922, 21,498; 1923, 8,461; 1924, 18,986; 1925, 12,721. During the first quarter of 1926, influenza caused 3,616 deaths in London and the 105 large cities alone.

PARIS

(From Our Regular Correspondent)

Feb. 9, 1927.

Vaccination Against Tuberculosis

The B. C. G. vaccine of Professor Calmette of the Pasteur Institute is being more and more widely used in France. It is given by mouth and only to the new-born during the first ten days following birth. Thus far, the vaccine has been administered almost solely in maternity hospitals, with the consent of the parents. Infants brought in from outside are likewise vaccinated. During the last three years, thousands of infants have been vaccinated, preference being given to those who, born of tuberculous parents, were destined to be brought up by their parents in an environment in which they would be constantly exposed to infection. Less than 1 per cent of these children have become tuberculous, and the few who have contracted the infection were found to have been associated with a mother who was gravely infected. In some instances it is possible that the fetus became infected in utero through the blood stream, vaccination coming thus too late, for the proponent of the treatment ascribes to it only prophylactic value.

In this connection, an interesting fact has recently been developed. Weill-Hallé and Turpin, who had used the B. C. G. vaccine for a long time in their hospital service, conforming strictly with the directions laid down by Calmette, decided to use the vaccine in hypodermic injections for infants who were brought in from outside after the lapse of ten days from birth, at which time Calmette himself refused to vaccinate them. Weill-Hallé and Turpin explained that they consented to do this in order to comply with the parents' wishes and in order not to deprive their children of even this slight chance of protection. Ten children have been thus vaccinated, after a preliminary four weeks' period of observation during which repeated clinical examinations and tuberculin tests were made, in order to avoid vaccinating any subject already infected, since vaccination would be liable to increase the virulence of the infection. The dose of vaccine at first employed was 0.001 Gm., and later, 0.00025 Gm., and the investigators hope to be able to diminish the dose still further. The Calmette peroral vaccination requires the use of 1,200,000,000 bacilli. The hypodermic vaccination of Weill-Hallé and Turpin comprises only 40 million or even as low as 10 million bacilli. The injection does not produce untoward effects, does not change the weight curve, and causes, at the most, only a slight local reaction in the form of a subcutaneous nodule, which appears at the end of three weeks, and which is sometimes followed by moderate glandular swelling. Between the thirty-fifth and the fortieth day, this nodule may be transformed into a small cold abscess, which opens spontaneously about the eighth week, and is succeeded by a serous discharge which persists for two or three months. Care is taken to avoid secondary infection. There remains only a punctiform and adherent deep scar.

The skin reaction to tuberculin then becomes frankly positive after a period of from two to three months.

Of the ten children thus vaccinated, only one succumbed. He had a skin reaction much earlier than the others; namely, a month after the injection. The other nine children have been under observation for two years while living in an environment infected by their parents, and they have remained thus far free from tuberculosis. It is an established fact that more than 50 per cent of unvaccinated children, the offspring of tuberculous parents, placed under such conditions, develop tuberculosis. Both the fathers and the mothers of these ten children were frankly tuberculous. The vaccinations were made at varying periods after birth. The shortest periods were three, seven, eight and nine weeks. The longest periods were four, five and nine months. These prolongations do not appear to have had any influence on the results. It is, however, still too early to form definite conclusions. It is nevertheless established that the B. C. G. vaccine may be employed after the lapse of longer periods than ten days.

A Record Holder for Surgical Operations

At a recent meeting of the Société de chirurgie, M. Robineau told of a patient of M. Robert Monod, who doubtless holds the record for the number of operations that she has undergone. Since 1898, this woman, now 47 years of age, has been operated on successively for a gastric ulcer, a cystic goiter (hemithyroidectomy), a movable kidney (nephropexy), subhepatic adhesions (laparotomy), a tumor of the right breast (amputation of that organ), renal tuberculosis (nephrectomy), polypi of the uterus (ablation), and uterine hemorrhages—in all, eight serious operations, without mentioning numerous other interventions of less importance, such as multiple tumors of the skin. The patient has not lost her confidence in surgery, and declares that she is ready to undergo any new operation that might be required.

First Aid in Emergency Obstetric Cases

The new chief of police of Paris is convinced that policemen should be so trained as to be equal to almost any emergency. Consequently, they are shown how to extemporize surgical dressings and the latest addition to their training consists in a short, intensive course in obstetrics. Every year, there are a number of emergency births in public places, so that the prefect of police has thought it best for policemen to be able to care for the newly born child, and to sever the cord at the proper time.

Radiologic and Electrologic Dispensaries

The prefect of the Seine has established in Paris (189, rue Vercingétorix) a third public dispensary for diagnosis by electrical apparatus and for electric, roentgen-ray and radium treatment. The three public dispensaries will supplement the work of those in the hospitals and at the Institut du radium, which latter is under the auspices of the University of Paris and the Pasteur Institute, and is under the direction of Dr. Regaud. In addition, there are several important private institutes. The three municipal dispensaries are semi-charitable institutions, which, in general, charge moderate fees but which render gratuitous service to persons who can prove they are without funds. All patients must present a certificate from their attending physician, setting forth his diagnosis and the treatment that he recommends.

Death of Dr. Marcel Briand

Dr. Marcel Briand, chief physician to the psychopathic hospitals of the department of the Seine, has died from a recurrence of an epithelioma of the tongue, at the age of 68. Briand was an eminent psychiatrist and an expert in legal medicine whose authority, impartiality and wisdom were highly esteemed. During the war, in addition to the directorship of a special civilian service at the St. Anne Hospital, he was appointed head of the psychiatric center of the military government of Paris, and it devolved on him to examine a considerable number of privates and officers summoned before the military courts for desertion or refusal of obedience. He had the courage to endeavor to make plain to the severe and sometimes rather incompetent judges the reality of war psychoses, fugues due to epileptic tendencies, and hasty acts committed under the domination of mental depression, fear and traumatic neuroses, while, on the other hand, he showed great skill in discovering simulations.

BERLIN

(From Our Regular Correspondent)

Feb. 12, 1927.

Law Pertaining to the Combating of Venereal Disease in Germany

After more than a year of agitation, a bill pertaining to the combating of venereal disease has been accepted by the reichstag. The bill was strongly opposed by the quacks because it restricts the treatment of venereal disease to physicians, whereas formerly quacks were allowed to give treatment. Syphilis and gonorrhea are within the scope of this law without reference to what parts of the body are affected. Any one affected with a venereal disease that is liable to prove infectious and has knowledge of the fact, or should assume that he is so affected, is under legal obligations to seek treatment by a physician holding a medical diploma issued by the government. Parents, guardians and educators are legally bound to procure proper medical treatment for persons in their care who have contracted venereal disease. The authorities must provide gratuitous treatment for persons without funds. Competent health boards are empowered to compel persons who are strongly suspected of having a venereal disease whereby others are being exposed to infection, to present a medical certificate setting forth their condition of health or to submit to an examination by a physician. Such persons may be required to accept treatment and may, if necessary, be interned for that purpose in a hospital. If necessary, physical force is permissible. Any one who cohabits when he knows, or should assume, that he has a venereal disease that is liable to infect others shall be sentenced to prison for three years. If the sexual intercourse in question occurred between married or engaged persons, action will be taken only on demand of the injured party. The same punishment holds for the person who enters on marriage without informing his or her future spouse of the presence of venereal disease. Treatment of the diseases must be based on actual observation of the patient; distant treatment and likewise instruction in self-treatment are prohibited. Violations of this provision are punished by a fine or a prison sentence up to one year. The same punishment awaits the physician who offers his services in an unauthorized manner for the treatment of the diseases concerned. Physicians are required to supply their venereal patients with an official leaflet containing information in regard to the nature of the disease with which they are affected. Physicians must furthermore inform the health officers of competent jurisdiction if their patients cease to appear from time to time, as required, for reexamination or treatment, or if, by reason of their occupation and their personal relations, they expose others to infection. Any one who recommends, or advertises publicly, remedies, devices or procedures for the relief of venereal diseases shall be given a prison sentence up to six months or shall have a fine imposed. An exception is made in favor of advertisements in scientific medical or pharmaceutic journals. Any woman who knows that she

has venereal disease and yet nurses the child of another, shall be fined or be given a prison sentence up to one year. Furthermore, any one who allows a child affected with syphilis or other venereal disease, for whose care he is responsible, to be nursed by any other person than the mother, although the condition of the child is known to him, is subject to a like penalty. The same penalties await the person who shall board out a child affected with venereal disease without informing the persons caring for the child in regard to the child's condition. The following, also, will be punished with fine or imprisonment: (1) a nurse who suckles the child of another without having secured a medical certificate showing that she is not affected with venereal disease; (2) any one who employs for the nursing of a child a wetnurse who does not hold such a certificate, and (3) any one who allows a child for whose care he is responsible to be nursed by any person other than the mother, without first consulting a physician. Furthermore, districts bounded by certain streets within which commercialized vice is permitted are prohibited by the new law.

Isolation of Vitamins

Professor Windaus, chemist of Göttingen, has succeeded in isolating the vitamin. In two addresses delivered in Göttingen and Munich, respectively, Windaus has given the details of his discovery. For a considerable period, it has been recognized that cod liver oil contains a substance that exerts a favorable influence on rickets, and that intensive ultraviolet irradiation will prevent rickets. For these researches, rats that had been made rachitic by feeding with unbalanced rations were used. From these facts it came to be generally accepted that, as a result of ultraviolet irradiation, a therapeutic substance—namely, the antirachitic vitamin—is produced from a precursor, or "provitamin." Stearin, which is found in small quantities in all vegetable and animal oils and fats, was assumed to be the provitamin. In collaboration, in part, with Dr. Hess, an American; two Englishmen, Dr. Webster and O. Rosenheim, and Professor Pohl, physicist, of Göttingen, Professor Windaus has carried out the following researches: First, it was established that the oxygen of the air, during the course of the activation by ultraviolet rays, is not the cause of the changed qualities of the antirachitic stearins. As a point of departure, a stearin was used which through irradiation becomes antirachitic; namely, cholesterol. It was difficult to establish what changes cholesterol undergoes as a result of irradiation, for only a very small portion of that substance is changed. One can show physiologically the antirachitic effect of such a substance by feeding it to rats, but it is impossible to establish chemically the changes that have occurred. It seemed plausible that, as a result of the ultraviolet irradiation, a small portion of the cholesterol is changed into a related isomeric substance, which must be the antirachitic vitamin. However, the experiments afterward undertaken with chemically pure cholesterols and phytosterins all proved negative, so that the assumption that cholesterol is identical with the provitamin had to be abandoned. Quantitative measurements of the absorption of ultraviolet rays by crystallized animal and vegetable stearins showed that the stearins as such are not the antirachitic provitamin but that the provitamin is contained in them merely as an impurity. As the absorption of ultraviolet rays served as an index for this impurity, procedures were worked out by which the provitamin in the parent substance could be enriched. By means of high vacuum distillation, Professor Windaus succeeded in producing a preparation that contained nine times as much provitamin as there was before the special treatment. He was able to establish further that the preparation constituted an unsaturated compound that was related to cholesterol. After several futile experiments with various other compounds that suggested themselves, ergosterin came within the purview of his observations. Ergosterin has the same color reaction as provitamin and is optically identical with it. When irradiated, ergosterin exerts a definite therapeutic effect on rickets in rats, so that it seems reasonably sure that ergosterin is the long sought provitamin or precursor of the vitamin. To be sure, what changes the ergosterin undergoes under the influence of the ultraviolet rays has not been established as yet, but it is assumed that a rearrangement of the structure takes place.

Professor von Bergmann's Call to Berlin

The question as to the successor of Prof. F. Kraus at the University of Berlin has been finally settled. Professor von Bergmann of Frankfort has decided to accept the call to Berlin, where he will take over the chair of internal medicine at the second medical clinic.

PRAGUE

(From Our Regular Correspondent)

Feb. 15, 1927.

Influenza

The first cases of influenza appeared in Czechoslovakia around Christmas and the peak was reached about January 20. The epidemic came from the southwest, as in 1918, while the epidemic of 1889 came from the east. The meeting of the Association of Czech Physicians, January 17, was devoted to the discussion of the present epidemic. Although the cases are mild, nevertheless, in 1918 the first wave, which appeared in the spring, was mild, while the second wave, which came in the summer and early fall, caused dreadful mortality. Clinically, the disease causes either a general reaction accompanied by fever, or catarrhal symptoms which are limited to the upper air passages. The minority of cases present signs of diffuse bronchitis with an inclination to bronchopneumonia. Generalized pain, pain in the back, and bleeding from the nose are common. Serious injury to the heart is seen only in very old patients. The catarrhal changes in the throat are often limited to the soft palate without involvement of the tonsils. There is a leukocytosis, which is slight in mild cases and more pronounced in serious cases. In the epidemic of 1918, leukopenia was the main feature of the blood picture. The leukocytosis is reminiscent of the epidemic of 1889. Cultures of hemolytic streptococci from the tissues of the fatal case were presented at the meeting. Pfeiffer's bacilli were not found. Pathologically, the present epidemic corresponds with the first phase of the epidemic of 1918, before bronchopneumonia became a serious complication. It is estimated that about 50 per cent of the population, old and young alike, have been stricken. All schools were closed in which more than 33 per cent of the pupils were sick. More cases were observed in schools of those districts of Prague in which housing conditions are bad than in schools of well-to-do districts. In the army, isolation was strictly enforced from the beginning of the epidemic, with comparatively good results. With the rise of the influenza epidemic, it was noted that the prevalence of other infectious diseases, such as scarlet fever, which are usually frequent at this time of year, practically disappeared. With the subsiding wave of influenza, these appeared again. Practitioners were advised to refrain from giving narcotics and analgesics in spite of the discomfort of the patients. Cardiac tonics were recommended because of the fear of cardiovascular complications. Reserve sickness insurance funds will be considerably depleted by the numbers of patients. Considerable money apparently has been wasted through malingering. Many took advantage of the possibility of obtaining paid leisure. The insurance physicians were

swamped with calls and could not take the time to eliminate those who asked assistance without being actually sick. The medicines that were prescribed in such cases represent another serious loss to the insurance funds.

Ministry of Health

Again Czechoslovakia has a new minister of health. It has been considered a certainty for some time that the ministry of health and the ministry of social welfare would be combined. Consequently, when the last cabinet was formed a minister of health was not appointed, and the ministry of health was placed under the minister of social welfare. But owing to the political situation another ministry was wanted in the cabinet and the position of the minister of health was filled again. The new minister is Dr. J. Tiso, a priest who comes from Slovakia. He is considered a very gifted young politician. Because he represents Slovakia in the cabinet, he probably will stress the cause of the eastern provinces, which greatly need intensive public health work. However, it seems certain that the ministry of health will disappear as an independent central authority as soon as the political situation permits its combination with another ministry.

Campaign Against Tuberculosis

The board of health of Greater Prague has taken the initiative in the unification and intensification of the campaign against tuberculosis in the city. The bulk of this work is done only by the dispensaries, a part of which are directly under the city board of health. Most of them are maintained by private agencies. If the dispensaries could be taken over by the city, they would have not only a guarantee of permanent support but also the authority they need in many cases. Although the city provides a considerable proportion of the funds for the maintenance of these dispensaries, it is not willing to take them over officially because the tendency is to cut down the items to which public money must be contributed permanently. On the other hand, the city health authorities do not have direct jurisdiction over the dispensaries and have to rely on their willingness to cooperate. In order to remedy this situation, it was decided lately that an executive committee shall be formed consisting of representatives of the city and of the private health agencies to cooperate in the fight against tuberculosis. The intensification of the campaign against tuberculosis in Prague is the result of a survey which disclosed an unusually high rate among school children.

Insurance for Students

Students have been neglected in the highly developed sytsem of sickness and invalidity insurance in Czechoslovakia. Only those who are dependent on a family in which a person is insured under the law are entitled to some of the insurance benefit. In order to remedy this situation, students' clinics have been established in Prague, Brno and Bratislava in which free treatment is given in urgent cases and especially in tuberculosis and venereal disease. These clinics are in the hands of private associations and receive a contribution from public funds. Moreover, the University of Prague has a fund donated through a private legacy, the interest of which is used to provide medical service to poor students. This applies only to the students of Prague University. Until recently, invalidity insurance for students in case of accident was not provided. In order to remedy this situation, the University of Prague has introduced compulsory accident insurance for all who are registered at the university. A small premium must be paid by the students at the time of registration. In turn, the university has entered into a contract with an insurance company. Very low premium rates were made possible by the large number of persons to whom insurance is issued.

Marriages

CARL M. BURDICK to Miss Florence Catherine Hofmeister, both of Seattle, at Portland, Ore., January 1.

WALTER DAWSON HALL to Miss Clara A. Panknen, both of Marengo, Iowa, recently, at Chicago.

HEYWOOD HILL HOPKINS to Miss Jeanne Burnett Halsted, both of New York, February 25.

ALFRED JOSEPH BUKA to Miss Wilma Audree Ravenstahl, both of Pittsburgh, recently.

JOHN E. MCCORVIE to Miss Anna Wieting, both of Peoria, Ill., January 11.

Deaths

Ira Remsen, president emeritus of Johns Hopkins University, Baltimore, and emeritus professor of chemistry, died at Carmel, Calif., March 4, following an attack of influenza, aged 81. Born in New York City, Dr. Remsen graduated from the College of the City of New York, from the Homeopathic Medical College of the State of New York, 1865, and from the Medical Department of Columbia College in 1867. He then studied chemistry in Germany, at Munich and Göttingen, and in 1870 became an assistant at the University of Tübingen. He was appointed professor of chemistry at Williams College in 1872, and in 1876 went to Johns Hopkins University as director of the chemical laboratory, which position he held until 1908. Dr. Remsen became president of Johns Hopkins University in 1901, and since 1912 has been president emeritus. He founded the *American Chemical Journal* in 1879, and has since been its editor. The Priestley Medal of the American Chemical Society was awarded Dr. Remsen in 1923, and many of the large universities awarded him honorary degrees. His books were for years the standard textbooks in high schools and colleges, and were translated into many foreign languages. He was the author of "Inorganic Chemistry," "Elements of Chemistry," "Introduction to the Study of the Compounds of Carbon, or Organic Chemistry," "Introduction to the Study of Chemistry," "A Laboratory Manual" and "Chemical Experiments," and of numerous scientific articles and addresses. Dr. Remsen served in an advisory capacity to the government, and his report as head of the Referee Board of Experts appointed by the President in 1908 was followed by the reversal of the government's ruling against the use of sodium benzoate as a food preservative. One of his last activities was as honorary chairman of a committee to raise funds for the establishment of fellowships in chemistry at Stanford University.

Henry Waldo Coe ● Portland, Ore.; Long Island College Hospital, Brooklyn, 1880; member of the House of Delegates of the American Medical Association, 1906-1907; member of the American Psychiatric Association; formerly professor of nervous and mental diseases, Willamette University Medical Department; at one time member of the North Dakota and Oregon State legislatures; past president of the North Dakota State Medical Association and the Oregon State Medical Association; founder and medical director of the Morningside Hospital; on the staffs of the Portland and Multnomah County hospitals, the Washington State School for Defective Youths, Vancouver, Wash., and the Oregon State Hospital for Insane, Salem; since 1893 editor of the *Medical Sentinel;* aged *69*; died, suddenly, February 15, at Los Angeles, of heart disease.

Dunning Steele Wilson ● French Lick, Ind.; University of Louisville (Ky.) School of Medicine, 1899; president of the Orange County Medical Society; professor of pharmacy, Louisville College of Pharmacy, 1906-1910; formerly adjunct professor of medicine, University of Louisville School of Medicine; formerly member of the Louisville School Board; medical director of the French Lick Spring Hotel; served during the World War; author of numerous articles on tuberculosis; aged 50; was killed, February 6, at Havana, Cuba, in an automobile accident.

Francis William McGuire ● Buffalo; Niagara University Medical Department, Buffalo, 1894; assistant professor of surgery, University of Buffalo Department of Medicine; served during the World War; on the staffs of the Buffalo

City, and Buffalo General hospitals; aged 60; died, January 28, of cerebral hemorrhage.

Michel Faustin Morvant, Jeanerette, La.; Medical Department of the Tulane University of Louisiana, New Orleans, 1909; member of the Louisiana State Medical Society; parish coroner; served during the World War; aged 49; died, February 16, of heart disease.

Isaac Sernoffsky ✠ Buffalo; University of Buffalo Department of Medicine, 1905; member of the American Academy of Ophthalmology and Oto-Laryngology; on the staff of the Buffalo City Hospital; aged 42; died, Nov. 12, 1926, of myocarditis.

Elbert du Bois Loughran ✠ Kingston, N. Y.; Columbia University College of Physicians and Surgeons, New York, 1902; served during the World War; on the staff of the Kingston Hospital; aged 46; died, Dec. 20, 1926, of brain embolism.

Walter S. Ellerbeck ✠ Salt Lake City, Utah; University of Pennsylvania School of Medicine, Philadelphia, 1894; for several years secretary of the Utah State Medical Association; aged 54; died, February 17, of acute dilatation of the heart.

Charles M. Barbee ✠ Portland, Ore.; Kansas City (Mo.) Medical College, 1902; member and past president of the state board of health; formerly president of the Oregon State Medical Association; aged 55; died, recently, of heart disease.

George Pierce Ikirt, East Liverpool, Ohio; Cincinnati College of Medicine and Surgery, 1877; Bellevue Hospital Medical College, 1883; formerly on the staff of the East Liverpool City Hospital; aged 74; died, February 12, of heart disease.

Harvey L. Henline, Pontiac, Ill.; Physio-Medical College of Indiana, Indianapolis, 1904; member of the Illinois State Medical Association; aged 69; died, February 14, at the Indiana Christian Hospital, Indianapolis, of coronary embolus.

George Worden Vincent Wilkinson, Morristown, N. J.; Medical Department of the University of the City of New York, 1889; member of the Medical Society of New Jersey; aged 61; died, February 9, of interstitial nephritis.

William Earl Wood ✠ Dalton, Ga.; University of Georgia Medical Department, Augusta, 1890; formerly mayor, member of the city council and member of the board of education; aged 62; died, February 7, of chronic pancreatitis.

Frank Brockway ✠ Oshkosh, Wis.; Columbus Medical College, 1892; attending physician at the Sunnyview Sanatorium, Winnebago; served during the World War; aged 57; died, February 14, of erysipelas and peritonitis.

William L. Mosby ✠ Bardwell, Ky.; Missouri Medical College, St. Louis, 1883; president of the Bardwell Deposit Bank; formerly member of the county board of health; aged 65; died, January 17, of heart disease.

Burnett Clinton MacIntyre, New York; Medical Department of Columbia College, New York, 1874; member of the Medical Society of the State of New York; aged 78; died, February 9, of cerebral hemorrhage.

Thomas J. Exton ✠ Thomasboro, Ill.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1890; University of Nashville Medical Department, 1899; aged 66; died, February 14, of cerebral hemorrhage.

Charles Montgomery Roberts, Umatilla, Fla.; University of Tennessee College of Medicine, Memphis, 1907; member of the Florida Medical Association; aged 44; died, Dec. 31, 1926, in an automobile accident.

Samuel Herst ✠ Binghamton, N. Y.; University of Budapest, Hungary, 1885; Medical Department of the University of the City of New York, 1889; aged 65; died, February 15, of acute dilatation of the heart.

Hampden Aulick Burke ✠ Rohrersville, Md.; Medical College of Virginia, Richmond, 1907; member of the Medical Society of Virginia; aged 41; died, January 13, at Shepherdstown, W. Va., of pneumonia.

Axel Emanuel Hedlund ✠ Dalton, Neb.; Creighton Medical College, Omaha, 1908; proprietor of the Pioneer Memorial Hospital; aged 47; died, February 11, at a hospital in Omaha, of heart disease.

James John Molony ✠ San Francisco; University of California Medical School, San Francisco, 1891; aged 54; died, February 9, of bronchopneumonia, following an injury received in a fall.

John K. Maloy, Milan, Ga.; University of Georgia Medical Department, Augusta, 1881; member of the Medical Association of Georgia; aged 70; died, February 11, of acute dilatation of the heart.

Joseph N. Blakemore, Florence, Ala.; Memphis Hospital Medical College, 1907; member of the Medical Association of the State of Alabama; aged 40; died recently, at Lorenzo, Texas, of sprue.

John William Decker, Dallas, Texas; University of the South Medical Department, Sewanee, Tenn., 1900; aged 64; died, January 30, at the St. Paul's Sanitarium, of carcinoma of the stomach.

William C. Buell, Maquoketa, Iowa; King Eclectic Medical College, Des Moines, 1885; member of the Iowa State Medical Society; aged 65; died, February 23, of cerebral hemorrhage.

Charles Eugene Douglass ✠ Lowville, N. Y.; Long Island College Hospital, Brooklyn, 1873; Jefferson Medical College of Philadelphia, 1882; aged 80; died, Dec. 30, 1926, of pneumonia.

William Kindol Farley ✠ Fulton, Ill.; Rush Medical College, Chicago, 1887; past president of the Whiteside County Medical Society; aged 76; died, February 12, of pernicious anemia.

Sidney B. Lutgen, Brock, Neb. (licensed, Nebraska, 1891); Civil War veteran; aged 92; died, February 14, at the Soldiers and Sailors Home, Milford, of softening of the brain.

George B. McGuin, Grinnell, Iowa; State University of Iowa College of Medicine, Iowa City, 1884; aged 71; died, in January, at the Community Hospital, of pneumonia.

Ansel M. Buckelew, Jasper, Ala.; University of Louisville (Ky.) School of Medicine, 1870; Confederate veteran; aged 83; died, February 16, of softening of the brain.

C. Frank Bruso ✠ Buffalo; University of Buffalo Department of Medicine, 1887; Spanish-American War veteran; aged 60; died, February 13, of arteriosclerosis.

Grover Cleveland Wilson, Salt Lake City, Utah; St. Louis University School of Medicine, St. Louis, 1913; aged 42; died, January 28, while at sea, of heart disease.

Adolph Oscar Aaker ✠ Minot, N. D.; College of Physicians and Surgeons, Chicago, 1907; aged 48; died, recently, of internal abdominal hemorrhage, due to a fall.

Charles Augustin Carrell, Cedar Hill, Texas; Vanderbilt University Medical Department, Nashville, 1888; aged 71; died, Nov. 21, 1926, following a long illness.

Peter Spearce Walker Geddes, Greenfield, Mass.; Eclectic Medical Institute, Cincinnati, 1886; aged 63; died, January 24, at Pine Bluff, N. C., of cardiorenal disease.

DeWitt W. Freeman ✠ Valdosta, Ga.; Atlanta College of Physicians and Surgeons, 1910; aged 42; died, February 7, at a local hospital, of chronic nephritis.

Alvah J. Stowe ✠ Minneapolis; Medical Department of the University of the City of New York, 1887; aged 65; died, January 14, of carcinoma of the stomach.

John H. Gross, Covington, Ky.; University of Pennsylvania School of Medicine, Philadelphia, 1879; aged 73; died, February 14, of carcinoma of the prostate.

John W. Mole, Brunson, S. C.; Medical College of the State of South Carolina, Charleston, 1876; aged 75; died, in February, of carcinoma of the tongue.

James Brayshaw, Odessa, Del.; Kentucky School of Medicine, Louisville, 1893; aged 79; died, January 22, of pleuropneumonia and valvular heart disease.

Nathan Webster Mastin ✠ Wellsboro, Pa.; Medical Department of the University of the City of New York, 1879; aged 79; died, February 4, of pneumonia.

Llewellyn Garnet Noel ✠ Nashville, Tenn.; University of Nashville Medical Department, 1871; also a dentist; aged 75; died, January 20, of pneumonia.

Abram J. Briggs, Hendersonville, N. C.; Medical College of the State of South Carolina, Charleston, 1887; aged 76; died, February 2, of pneumonia.

William B. Meany, Washington, D. C.; University of Louisville (Ky.) School of Medicine, 1876; aged 78; died, Dec. 19, 1926, of cerebral hemorrhage.

Chrysostom John Leary ✠ New Bedford, Mass.; Medical School of Harvard University, Boston, 1901; aged 58; died, February 7, of pneumonia.

Edward Sterne Sharp, Salem, N. J.; University of Pennsylvania School of Medicine, Philadelphia, 1854; aged 94; died, February 9, of senility.

Correspondence

INGUINAL HERNIA

To the Editor:—In his article on "Fundamental Principles Underlying the Operative Cure of Inguinal Hernia" (THE JOURNAL, February 19), Dr. M. G. Seelig, speaking of the Andrews procedure of suturing the mesial edge of the cut aponeurosis of the external oblique muscle to Poupart's ligament, said: "I believe that in the literature there has been only one formal protest against the procedure. W. M. Brickner (*Am. J. Surg.* **40**:73 [March] 1926) called attention to the fact that normally the external oblique aponeurosis is attached to Poupart's ligament, and that therefore the Andrews procedure merely restores structures to the status in which they were before the inguinal canal was exposed by incision of the external oblique aponeurosis. This objection is not easily or convincingly answered."

I would not like to be understood to "protest against" this procedure. What I wrote was: "To sew the cut edge of the externus obliquus aponeurosis . . . to Poupart's ligament . . . does not change the condition existing before the operation or introduce any fresh support, except in so far as it narrows the external ring and somewhat increases the tension of the aponeurosis . . . for, of course, that aponeurosis extended to the ligament before the incision was made to expose the canal." Narrowing the external (subcutaneous) ring is probably quite helpful when artificial support is necessary, especially in cases of direct hernia with a large hiatus in an attenuated transversus fascia; and, of course, if the external oblique aponeurosis is sutured to the inguinal ligament beneath the cord, that is to say, if the cord is transplanted on top of this aponeurosis, which is done by Seelig in all his inguinal hernia operations, then, indeed, the architecture of the canal is altered by the procedure.

WALTER M. BRICKNER, M.D., New York.

A DEFENSE OF THE RECENT GRADUATE

To the Editor:—It has been my good fortune to attend many of the meetings of the Annual Congress on Medical Education, Medical Licensure and Hospitals. The beneficial influence of these meetings on medical education is generally admitted. The spirit at the last meeting especially was emphatically progressive. There is one item, however, about which the opinion of many of the older and most influential members seems entirely wrong; that is, the relative ability and preparation of the recent and the older graduate to practice medicine. The recent graduate, when he begins practice, is vastly better equipped than the graduate of thirty or forty years ago was after ten or more years of practice, and in most cases is better than the graduate of thirty or more years' experience. This, of course, would not apply to a specialty like surgery, or to practice with a group of older men, which may be essentially postgraduate work. But even in such a case, the recent graduate, everything else being equal, should mature much more rapidly than his older colleague.

The basis of this opinion rests on such facts as the following: The interns of Cook County Hospital at Chicago (taken as a type) during their service in the receiving room, and with only a few minutes for making a diagnosis, are correct in 85 per cent of the cases. These diagnoses are verified by attending men of high diagnostic skill. This fact in itself negates the statement often made that a recent graduate cannot use his eyes, fingers and judgment, but relies too much on instruments and laboratory reports.

Another complaint often made is that the recent graduate is unable to prescribe and to treat patients so well as the older graduate. Doubtless the older men learn much therapy in practice. So will the recent graduate, and few persons know better than the medical faculties of the weakness in this field. Every effort is being made to improve this condition, but it never will be perfect.

In this field, however, the recent graduate could not be any worse than the older men. If one examines the prescription files written even by the best—or at least the most prominent—of the older men, one feels that the recent graduate is much superior, at the corresponding time. Comparisons, however, are always odious; there is nothing gained by the kettle calling the pot black, and there is less gained by reminding the young graduate that the older man knows more.

It seems to me that the time has come for the older men, in spite of their successful careers, to admit some of their failures, and to tell how these might have been avoided.

I do not mean this as a criticism of the older men, since it is remarkable how well they have done under the circumstances. Neither is it an apologia for the recent graduate, since he needs none. It is a statement of fact only.

The better training of the younger men is due largely to the influence of the congresses of medical education, and the influence, it would appear, is going to continue.

H. A. MCGUIGAN, Chicago.
Professor of Pharmacology, Materia Medica and Therapeutics, University of Illinois College of Medicine.

"FUNCTIONAL STUDIES THROUGHOUT THE COURSE OF ROENTGEN-RAY NEPHRITIS IN DOGS"

To the Editor:—In a recent paper (THE JOURNAL, January 15, p. 139) under the title given, Hartman, Bolliger and Doub have shown that chronic interstitial nephritis, quite typical of chronic interstitial nephritis in man, can be produced in dogs by exposing their kidneys to large doses of roentgen rays. These authors have thus produced in an experimental animal a lesion that promises for the first time to allow a more careful study of this disease. One question not discussed by them, or by others discussing their paper, is the significance of their work for a possible classification of chronic interstitial nephritis in terms of other pathologic processes peculiar to man. For a great many years it has been fully appreciated that the pathologic classification of nephritis does not fit the clinical pictures. Chronic interstitial nephritis is not a disease similar to the true chronic infectious processes from which the kidneys may suffer. In spite of this fact, pathologists have continued to classify it with these inflammatory processes, and it has not been possible to do otherwise until this work appeared. The means which they have used to produce the first true chronic interstitial nephritis experimentally is burning the kidneys with roentgen rays. In recent years, it has been fully understood that certain definite lesions precede the development of cancer in the organism. These lesions have been called precancerous lesions. The most common of these precancerous lesions is a lesion characterized by atrophy and hyaline changes in the tissues, cystic degenerations, sclerosis of the larger blood vessels, and a disappearance of the smaller ones. It is exemplified in the senile atrophies of the skin, the atrophies and hyaline changes noted in the skin after long exposure to sunlight and certain artificial lights, chronic cystic mastitis of the breast, certain types of cirrhosis of the liver, atrophies and hyaline changes in the ovaries, leukoplakia, kraurosis, and the atrophies and hyaline changes following the injection and surface application of mineral, certain vegetable and animal oils. Roentgen rays act always to produce this class of lesion and, as is well known, roentgen-ray burns of the skin will practically always become the seat of active cancerous processes later.

Chronic interstitial nephritis, quite different from many chronic inflammatory lesions, is progressive and leads invari-

ably after a shorter or longer time to the destruction of the individual. While this lesion on account of the round cell infiltration and evidences of hyaline and degenerative changes has been thrown in a general class with chronic inflammations, it must be noted that not only its experimental production by roentgen rays, but also its general clinical course in man indicates clearly that it must be as sharply separated from ordinary chronic inflammations as leukoplakia, kraurosis, senile atrophy and roentgen-ray burns are separated.

Chronic interstitial nephritis in man is characterized chiefly by atrophy and degeneration of the tubular parts of the kidney, marked hyalinization of these degenerated parts and areas of the connective tissue, and a sclerosis of the larger vessels and a great loss of the smaller ones. In these areas of degeneration quite typical of chronic cystic mastitis, epithelial lined cysts of various numbers and sizes make their appearance. It differs from chronic cystic mastitis and many other precancerous lesions only in that it involves an organ whose function is vital to the individual.

It is also not a lesion whose progress can be stopped as the progress of the true infectious inflammations of the kidneys may be stopped, but progresses either continuously or intermittently as this general class of precancerous lesions progresses.

For this reason, it has been of considerable interest to me to follow this work of Hartman, Bolliger and Doub. It seems quite evident that their work has cleared up a great gap in the knowledge of this disease. The true nature of chronic interstitial nephritis and the best methods for its treatment must become apparent, therefore, when the cause of these precancerous lesions has been carefully analyed. Recent work (Burrows, M. T.: *J. Cancer Research* **10**:239 [July] 1926; The Production of Malignant Ulcers in the Skin of Rats, The Nature of Atrophy and Hyalinization of Cells and Tissues, Studies on the Nutrition of Body Cells with Notes on the Treatment and Prevention of Cancer, to be published. Jorstad, L. H.: *J. Cancer Research* **10**:229 [July] 1926. Burrows, M. T.; Jorstad, L. H., and Ernst, E. C.: Further Studies of the Effect of Graded Doses of Roentgen Rays, to be published) has indicated that these lesions are the result of the removal of the fat soluble vitamins from the tissues. This work is the result of studies of factors regulating the growth of tissue cells, and analyses of the structure of cells and intercellular substances. It has indicated that oils act to produce these precancerous lesions by directly dissolving the fat soluble vitamins from the tissue. Roentgen rays act by mobilizing these vitamins in the areas of tissue absorbing them. These mobilized vitamins are then removed by other tissues of the organism. While it has been impossible to replace these vitamins to tissues that have thus lost them, it has been interesting to note that they are removed most readily by roentgen rays and oils from animals fed on a dietary poor in fat soluble vitamins and with greatest difficulty often from animals fed on a diet rich in these vitamins.

It must be pointed out here, however, that this does not indicate that patients with chronic interstitial nephritis must be fed on a diet rich in fat soluble vitamins. In the treatment of chronic interstitial nephritis one has not only the kidneys to protect and heal, but the body as a whole must be protected also. High vitamin A diets decrease function. A carefully controlled vitamin balanced dietary is the one indicated, and this diet must be balanced to suit the case treated (Burrows, M. T., and Jarstad, L. H.: The Cause of the Growth of Sarcoids or Oil Tumors, to be published).

MONTROSE T. BURROWS, M.D., St. Louis.
Associate Professor of Experimental Surgery, Washington University School of Medicine, director of Research Laboratories, Barnard Free Skin and Cancer Hospital.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

ASTHMOLYSIN

To the Editor:—Have you any reports on asthmolysin, distributed by Dr. Kade, 80 Wall Street, New York?

C. M. GLEASON, M.D., Manitowoc, Wis.

ANSWER.—Asthmolysin has not been accepted for New and Nonofficial Remedies nor has the distributor requested an examination of it by the Council on Pharmacy and Chemistry. According to the advertising, Asthmolysin is "a combination of the suprarenal and pituitary hormones in distinct proportions" which is prepared by a "special method." In the series of articles on glandular therapy published under the auspices of the Council on Pharmacy and Chemistry, Dr. Joseph L. Miller states (THE JOURNAL, Nov. 29, 1924, p. 1769) that the use of pituitary in bronchial asthma is contraindicated. While epinephrine is used with advantage in some forms of asthma, there does not appear to be any reason why physicians should use a secret preparation containing an undetermined amount of it, when accuracy of dosage and therapeutic effectiveness may be obtained by the use of the pharmacopeial product.

COBALT GLASS TEST

To the Editor:—In a commercial advertisement of ophthalmic apparatus, I note this: "Cobalt glass test—for quick determination of myopia, hyperopia and astigmatism." This refers, I presume, to qualitative determination. Please tell me just how this is employed.

J. B. H. WARING, M.D., Blanchester, Ohio.

ANSWER.—Cobalt glass has been used as a subjective method of determining the presence, amount and character of errors of refraction. It is not as satisfactory as other subjective methods and is not in common use.

The principle on which the test is based is that light in passing through a prism is refracted and dispersed into the elementary colors. The blue rays are brought to a focus at one point and the red at another sufficiently separated to enable the patient to differentiate between them readily. If the eye is emmetropic, the patient will see a violet light surrounded by a blue ring; if hyperopic, a blue light surrounded by a red ring; if myopic, a red light surrounded by blue.

The chromatic eye test (Lorenz) is fully described in the American Encyclopedia of Ophthalmology **3**:2193-2196.

"CROUPOUS PNEUMONIA"—"MEMBRANOUS CROUP"—"SCARLATINA"—ASTHMA—ABSORPTION FROM STOMACH

To the Editor:—1. In the list of questions for examination submitted by the State Medical Board of Ohio for December, 1926, question 7, under the head of practice, reads: "Give diagnosis and treatment of croupous pneumonia in a child of 6 years." Is there such a condition as "croupous pneumonia"? I never heard of but two kinds—lobar pneumonia and bronchopneumonia. Is the word "croupous" a misnomer or obsolete, or entirely a wrong designation of pneumonia? 2. Is there such a disease as scarlatina? Is it a case of scarlet fever in a mild form? 3. Is there such a disease as membranous croup? Is it not a case of diphtheria in a mild form? 4. Can the cause of asthma, whether simple, spasmodic or any other kind, be determined? 5. I read from a medical source this statement: "Nothing is absorbed from the stomach, neither water, food or medication of any kind." Is this a fact or is it not?

G. K. HEIDLER, M.D., Cleveland Heights, Ohio.

ANSWER.—1. Croupous pneumonia has been commonly used as a synonym of fibrinous and lobar pneumonia. It is a proper term and established by long usage.

2. Scarlatina is the Latin term for scarlet fever and does not have any reference to the severity of the disease.

3. Membranous croup is a term based on pathologic anatomy; i. e., it indicates a membranous exudate on the surface of the mucous membrane. It is well known that various causes may operate to produce such a membrane, as diphtheria bacilli and various cocci. The term has been used to distinguish cases of croup with a membranous exudate from those of spasmodic or from catarrhal croup in which such an exudate is absent.

4. The exciting cause of asthma can often be determined by careful study of each case.

5. The statement quoted is not correct. The absorption of water from the normal stomach is practically nil. The absorption of soluble substances, such as peptones, amino-acids, sugars, dextrins and inorganic salts, from the stomach, is variable. Most observers agree that all these substances are absorbed in small amounts even from the normal stomach. They also agree that most of these substances leave the normal stomach and are mainly absorbed in the small and the large intestine. Conditions are different, of course, in cases of atonic or obstructed stomach in which swallowed material remains in the stomach for an abnormal length of time. There is some evidence that the stomach mucosa of infants or young children absorb even such food materials as fats to a greater extent than the stomach of adults. This is in line with the general greater permeability of the mucous membrane of the alimentary canal in the infant.

As to the question of the absorption of drugs by the gastric mucosa, all observers agree that alcohol is readily absorbed, and there appears to be a difference in the gastric absorption of drugs in different species of animals; but it is probable that even in man all water soluble drugs are absorbed in small amounts in the stomach itself. Sollmann says:

> The relative rôle of the stomach and intestines in absorption varies for different drugs and animals. Strychnine, for example, is absorbed from the stomach of dogs and cats but not from the stomachs of rabbits and guinea-pigs, whereas sodium salicylate and iodide give just the opposite results in these animals. Inoye and Kashiwado have shown that atropine and rhubarb are not absorbed from the dog's stomach, whilst salol is absorbed. The data as to man are insufficient (A Manual of Pharmacology, 1926, p. 71).

Observations on the absorption of drugs from the normal stomach are inadequate, and data on absorption of drugs from various types of pathologic stomachs, such as obstruction and hyperemia, are almost entirely lacking. That water as well as foods may be absorbed in the infants' stomach in not inconsiderable amounts seems to be indicated by the fact that infants with congenital pyloric obstruction may do fairly well nutritionally, despite their vomiting, for the first two or three weeks of life.

Working with dogs, E. S. London reports rapid absorption of such substances as alcohol and potassium iodide from the stomach, but he was unable to find evidence of absorption of sugars or dextrins (Experimentelle Physiologie und Pathologie der Verdauung, Berlin, 1925, p. 79).

EXERCISES FOR CHANGING POSITION OF FETUS

To the Editor:—Will you please let me know whether rolling or flopping or pirouetting has been used during the last few weeks of pregnancy or at labor to correct occipitoposterior positions? If so, where can we find a description of the method?

W. B. HANBIDGE, M.D., Ogdensburg, N. Y.

ANSWER.—As far as is known, rolling, flopping and pirouetting are not used at the present time for the correction of occipitoposterior positions, or for any other abnormalities in presentation or position. However, these and more forcible manipulations were used by primitive peoples, especially the Indians, to overcome dystocia, regardless of the cause. An excellent account with illustrations is to be found in G. J. Englemann's "Labor Among Primitive Peoples," St. Louis, J. H. Chambers & Co., 1882. More information can be obtained in the second volume of H. Ploss's "Das Weib in der Natur- und Völkerkunde," Leipzig, Grieber (L. Fernau), 1885.

INGUINAL HERNIA — HOMATROPINE SOLUTIONS

To the Editor:—1. I have a case of complete right inguinal hernia in a new-born baby. Do many of these cases become cured without an operation; if not, when is the best time to operate? Should the child wear a truss and, if so, what kind of a truss? The child is strong and well developed in every other way. 2. How long can a 2 per cent homatropine solution be kept without deteriorating? Please omit my name.

M.D., Nebraska.

ANSWER.—1. In infants and children under 4 years of age, probably more than 75 per cent of hernias are cured by the use of a truss. The earlier it is used and the smaller the hernia, the better is the chance of a cure. For the first few weeks of infancy, or until it is convenient to fit a truss, a few strands of knitting wool may be used for this purpose. Several strands of wool are doubled and the loop held over the inguinal opening while they are passed around the pelvis and then through the loop. The strands are tightened and passed around the perineum and tied in the back. This must be changed frequently and must not be too tight. A spring truss may be carefully fitted immediately after birth, but it should be watched by the physician and changed once or twice a year as the baby grows. If the apparatus does not retain the hernia, it should be removed immediately.

The hernia should be operated on immediately, at any age, if strangulation occurs. If colicky pains occur, if the hernia becomes irreducible, if there is a hydrocele, an undescended testis, or if the hernia is large and difficult to retain, operation may be indicated. However, reasonable delay may be permitted until the child is in good general condition and several months old. At the age from 3 to 4 years, unless there is some evidence of a cure following the continued use of a truss, the hernia should usually be operated on.

2. If a sterile solution is kept in a glass container which does not yield an appreciable amount of "alkali," and is protected from light and air, we do not know any reason why it should not keep for a relatively long time. From a practical standpoint, the keeping of solutions of alkaloid salts in stock bottles is not to be recommended.

DANGERS TO ROENTGENOLOGISTS

To the Editor:—Please comment on the following: Factor of safety in the health and life of roentgen-ray operators. If roentgen-ray therapy is not practiced and the operator confines himself to diagnosis, is the safety factor increased? Is a lead screen sufficient? Is a lead lined cell better? Are the dangers chiefly anemia and sterility? Please omit name.

X. Y. Z.

ANSWER.—If roentgen-ray treatment is not given, the hazard to the persons operating the apparatus under the conditions mentioned depends entirely on whether or not the work is limited to roentgenography or whether fluoroscopic work also is done. When fluoroscopic work is part of the activities of a roentgen-ray laboratory, the danger to the skin is greatest, the sex glands come next, and the blood last.

Protection against these hazards must include the wearing of lead rubber gloves, a lead rubber apron, or the use of a leaded stool with shield to protect the body. The work should be arranged so as to minimize exposure; that is to say, all the fluoroscopic work should be done in the shortest time possible. The room in which the work is done should be thoroughly ventilated.

So far as radiographic work is concerned, a booth lined with lead one-sixteenth inch thick is the best protection. The booth should be so planned that all crevices and joints are similarly protected. The danger in radiographic work is chiefly one concerning the sex glands and anemia, and can be entirely obviated by adopting the foregoing measures.

DERMATITIS FROM TURPENTINE

To the Editor:—Recently, two painters who have been working at their occupation for many years have come to me presenting a typical dermatitis of the occupation type, involving the face and hands. This has been so severe as to force them to give up their work for weeks at a time. A careful investigation of the possible source has led me to believe that the irritating substance is contained in the turpentine they are using. Both the painters have informed me that the present turpentine is distinctly different from that formerly used, and they refer to it as "stump turpentine." I am wondering whether the newer methods in the manufacture of turpentine have led to the introducing of impurities which might be responsible for this condition, and whether you know of any form of prophylactic or palliative treatment that would make it possible for these men to continue at their work.

H. K. PETRY, M.D., Warren, Pa.

ANSWER.—This was discussed in THE JOURNAL, June 26, 1926, p. 1979.

The term "wood turpentine" is better suited to the newer types of turpentines than "stump turpentine."

There are two types of "wood turpentine"; namely, steam distilled wood turpentine and destructively distilled wood turpentine. These turpentines are made from light wood, i. e., dead, highly resinous pine woods, including stumps, instead of from living pine trees from which source "gum spirits" turpentine is obtained.

Any kind of turpentine may produce a severe dermatitis, but the likelihood of a resulting dermatitis is increased if exposure to wood turpentine takes place. This is due to the fact that the processes of distillation and purification lead to the formation of constituents in these wood turpentines different from the constituents of gum spirits turpentine. Wood turpentines may contain acetic or formic acid, and various aldehydes may be present. Exposure of turpentines to air probably increases the irritant qualities.

Although some painters appear to develop something akin to a tolerance to turpentine, others develop an exquisite

susceptibility. In still others, complications from fungus infections tend to prolong the dermatitis unduly. In the instance of the two cases mentioned, an attempt to overcome this susceptibility should be made, when the patient is apparently sufficiently recovered to return to his occupation, by instructing him to cover the hands, forearms and face lightly with some tenacious, greasy substance such as hydrous wool fat. Painting in close areas, such as in closets, should be avoided. Unnecessary exposure of turpentine to oxidation and to sunlight should likewise be avoided. Spray painting with turpentine should not be done unless a protective booth is in use. If such steps as these do not afford protection, it may prove necessary for these painters to give up this type of work, at least for the time being.

Many paint solvents other than turpentine are capable of producing this type of dermatitis.

RADIUM IN TREATMENT OF GOITER

To the Editor:—Please state the merits of radium in the treatment of exophthalmic goiter or toxic goiter. Please omit name.

M.D., Minnesota.

ANSWER.—There is a difference of opinion among medical writers and practitioners as to the efficacy of this method of treatment. Some medical practitioners believe in rest in bed and the use of roentgen ray and radium, given by competent radiologists, over a number of weeks. Probably the results obtained by this method are an amelioration of the symptoms in almost all cases; but seldom, if ever, is there a complete recovery. The patients remain more or less disabled. It is believed that there is some destruction of the thyroid tissue either by direct action of the rays or by the shutting off of the blood supply incident to the destruction of the endothelial cells of the blood vessels. In other words, the results obtained are comparable to those obtained by ligation of the blood vessels.

Virtually all surgeons and many internists who have made a careful study of this subject believe that the results obtained by subtotal or maximum thyroidectomy are far superior to those obtained by radium and roentgen ray, since by this method practically all toxicity is removed. Unless the disease has lasted too long, the patients are restored to complete health without any disability whatever, and in the hands of competent surgeons the mortality is extremely low.

EFFECTS OF COLD DRINKING WATER

To the Editor:—We are very desirous of obtaining information on the effects of cold water on the stomach and the general health of the individual under manufacturing conditions. We would appreciate any information on this subject which you may have available, or suggestions as to where this information might be obtained.

F. A. KINCH, JR., Dayton, Ohio.

ANSWER.—When large quantities of highly chilled water are ingested, particularly when high temperatures and relatively low humidities exist, industrial workers are apt to develop a gastro-enteritis manifest through diarrhea and cramping pain. At times the condition simulates heat exhaustion. This condition has greater prevalence in industry only because hard physical exertion leads to greater demands for water intake. Improper drinking water facilities in industry favor the intake of large quantities at one time, rather than the intake of small quantities at frequent intervals—a practice that is more desirable. Under conditions of high temperature and relatively low humidity, persons engaged in ordinary activities may require six quarts of fluid in a twenty-four hour period. Under the same conditions of temperature and humidity, the industrial worker engaged in hard labor, such as in a steel mill, will frequently ingest ten quarts of fluid in a twenty-four hour period.

To avoid the harmful effects of chilled water, industrial drinking water supplies should be maintained at a temperature in summer of from 50 to 55 F. Colder water favors the development of the conditions described above. Warmer water (above 55 F.) is so lacking in palatability as to be ingested in insufficient quantities properly to offset losses of water from the body.

The exact mechanism of the injury from highly chilled water is uncertain. Apparently, a hypermotility of the gastro-intestinal tract develops as a result of an imbalance of the dual nervous mechanisms regulating gastro-intestinal functions.

Medical Education, Registration and Hospital Service

ARIZONA: Phoenix, April 5-6. Sec., Dr. W. O. Sweek, 404 Heard Bldg., Phoenix.

COLORADO: April 5. Sec., Dr. David A. Strickler, 1011 Republic Bldg., Denver.

DISTRICT OF COLUMBIA: April 12. Sec., Dr. Edgar P. Copeland, 1801 Eye St., Washington.

IDAHO: Boise, April 5-6. Commissioner of Law Enforcement, Hon. F. E. Lukens, Boise.

ILLINOIS: Chicago, April 5-7. Supt. of Registration, Mr. V. C. Michels, Springfield.

MINNESOTA: Minneapolis, April 5-7. Sec., Dr. A. E. Comstock, 636 Lowry Bldg., St. Paul.

MONTANA: Helena, April 5. Sec., Dr. S. A. Cooney, Helena.

NEVADA: Carson City, May 1. Acting Sec., Dr. Edward E. Hamer, Carson City.

NEW MEXICO: Santa Fe, April 11-12. Sec., Dr. W. T. Joyner, Roswell.

RHODE ISLAND: Providence, April 7-8. Sec., Dr. B. U. Richards, State House, Providence.

UTAH: Salt Lake City, April 5. Director of Registration, Mr. J. T. Hammond, 412 State Capitol Bldg., Salt Lake City.

WASHINGTON: Seattle, April 11. Reciprocity meeting only. Asst. Director of Licenses, Mr. George L. Berger, Olympia.

WEST VIRGINIA: Charleston, March 16. Commissioner, Dr. W. T. Henshaw, Charleston.

WISCONSIN: Basic Science Board, Madison, March 19. Sec., Dr. M. F. Guyer, Madison.

Ohio December Examination

Dr. Henry M. Platter, secretary of the Ohio State Medical Board, reports the oral, written and practical examination held at Columbus, Dec. 1-3, 1926. The examination covered 10 subjects and included 80 questions. An average of 75 per cent was required to pass. Of the 47 candidates examined, 45 passed and 2 failed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent
Yale University School of Medicine		(1925)	83.5
Howard University School of Medicine		(1926)	81.3
University of Maryland School of Medicine		(1926)	87
Tufts College Medical School		(1912)	75*
St. Louis University School of Medicine		(1926)	78.5, 79, 79.5, 80.5, 84.3, 84.4
Washington University School of Medicine		(1915)	81.6
Cornell University Medical College		(1926)	83.6
Eclectic Medical College, Cincinnati		(1926)	85
Ohio State University College of Medicine		(1926)	78.1, 85.3, 88.2
Hahnemann Medical College and Hospital, Philadelphia		(1926)	80.4, 83.2
University of Pittsburgh School of Medicine		(1926)	83.1, 85.4
Meharry Medical College		(1924)	78.7
University of Alberta Faculty of Medicine		(1926)	88.2
University of Manitoba Faculty of Medicine		(1924)	83.8
Dalhousie University Faculty of Medicine		(1926)	77.5
Queen's University Faculty of Medicine		(1924) 82.9, (1926)	80, 81.6
University of Toronto Faculty of Medicine		(1918) (1922) 75.7, (1924) 78.8, 80.7, 81, (1925) 80.5, (1926) 82.8, 83.5, 88	79.7,
University of Western Ontario Medical School		(1923) (1926) 81.6	79.2,
McGill University Faculty of Medicine		(1924) 84.3, (1926)	87.8
University of Freiburg, Germany		(1922) 78.3, (1926)†	80.7
University of Giessen, Germany		(1923)	77.4
University of Marburg, Germany		(1924)	75
University of Munich, Germany		(1921)	78.6

College	FAILED	Year Grad.	Per Cent
Starling Medical College, Columbus		(1880)	48.8
University of Naples, Italy		(1923)†	72.8

* Eight per cent allowed for years of practice.
† Verification of graduation in process.

Missouri November Examination

Dr. James Stewart, secretary of the State Board of Health of Missouri, reports the written examination held at Kansas City, Nov. 16-18, 1926. The examination covered 14 subjects and included 105 questions. An average of 70 per cent was required to pass. Twenty candidates were examined, all of whom passed. The following colleges were represented:

College	PASSED	Year Grad.	Number Passed
Howard University School of Medicine		(1926)	1
Rush Medical College		(1926)	1
Indiana University School of Medicine		(1918)	1
University of Kansas School of Medicine		(1921), (1925, 3), (1926, 5)	9
University of Louisville School of Medicine		(1926)	1
Johns Hopkins University Medical Department		(1923)	1
St. Louis University School of Medicine		(1926)	1
University of Oklahoma School of Medicine		(1915)	1
University of Pennsylvania School of Medicine		(1918), (1925), (1926)	3
Southwestern University Medical College, Dallas		(1908)	1

Book Notices

THE TREATMENT OF CHRONIC DEAFNESS BY THE ELECTROPHONOIDE METHOD OF ZÜND-BURGUET. By George C. Cathcart, M.A., M.D., Consulting Surgeon to the Throat Hospital, Golden Square. Cloth. Price, $1.35. Pp. 88, with 1 illustration. New York: Oxford University Press, 1926.

The author takes up the causation and prevention of deafness as well as its treatment. He lays considerable stress on the effect of adenoids or other conditions in the nasopharynx. After a summary of the usual methods of therapy employed by most otologists, he discusses in detail the theory of reeducation of the deaf by means of various sounds, from the time of Itard, in 1802, to the use of the apparatus mentioned in the title. Victor Urbantschitsch is the one who devised the elaborate system for the reeducation of the deaf by means of the voice. However, it is well known that this is of value in only a limited number of cases. The author states that with the electrophonoide the various tones of the human voice are reproduced, and, by conducting these to the ear, improvement in hearing is obtained in many cases. The apparatus is rather complicated. So far as the results of the treatment of such conditions as nerve degeneration and chronic otitis media are concerned, there is rather marked disproportion between the great improvement noted for conversation and that obtained for the whisper. It is also noteworthy that in the cases listed as otosclerosis, improvement is noted in 50 per cent of the cases, which is unusual in view of the nature of the disease. This is a readable little book, but despite the fair manner in which the author presents the cases, one must be skeptical regarding the ultimate results, provided the original diagnosis of the disease was correct. While it is true that use of the tones found in the voice may act as a stimulus when there are remnants of hearing, in cases of actual deafness results can hardly be expected.

THÉRAPEUTIQUE CHIRURGICALE OPHTALMOLOGIQUE. Par Duverger, professeur à la Faculté de médecine de Strasbourg, et Velter, professeur agrégé à la faculté de Paris. Cloth. Pp. 480, with illustrations. Paris: Masson & Cie, 1926.

In the introduction, the authors state that they did not wish to write a treatise nor yet an encyclopedia of the surgery of the eye, but rather a description of the technical procedures that have proved of the greatest value in their hands, together with the most important indications for the various types of operation. Nevertheless, they have succeeded in producing what is probably the most instructive modest sized book on surgery of the eye of recent years. Most striking are the illustrations. The plates, some in black and white and the majority in full colors, each have from six to ten illustrations of various operative steps and are so clearly illustrative that accompanying text is almost unnecessary. It is of course unfortunate that the plates cannot be invariably located opposite the descriptive matter; but the make-up of the book precludes that. Historical references are not given, and the various operations are not referred to by individuals' names, except in a few instances. This is a marked step forward and could well be copied by other ophthalmic writers. The indications for operation are not given in detail, but the various steps of different operations are described fully, as are the commoner complications. A few mistakes have been noted as, for example, the statement that Zeiss telescopic spectacles have a magnification of four diameters instead of two, and the spelling of Kuhnt with an umlaut. But, taken by and large, there are few mistakes in proof reading. Several portions of the book stand out, through either weakness or strength. The treatment of the surgery of the ocular muscles would lead to the impression that there are only a very few cross-eyed people in France. The plastic work about the eye is excellent and reflects the type of surgery that was so necessary subsequent to the war. Keratoplasty is not handled well, and the only type of keratoplasty that has really given any result, the through and through operation of von Hippel, is not even mentioned. The operations for cataract and glaucoma are well described and excellently illustrated, but there is a paucity of the various types. A long chapter is devoted to injuries; however, owing to the lack of illustrations and the multiplicity of traumatic possibilities, this is the weakest chapter in the book. The paper and printing are good, and the binding will hold together for more than one perusal. This is one of the best and most instructive books that have been published in recent years. It is not for the beginner in ophthalmology nor is it for the accomplished ophthalmic surgeon, but it is a valuable guide for the ophthalmic clinician.

SULFUR METABOLISM: A Review of the Literature. By Max Kahn, M.A., M.D., Ph.D., Associate in Biological Chemistry, School of Medicine, Columbia University, and Frederic G. Goodridge, M.D., Ph.D., Associate in Biological Chemistry, School of Medicine, Columbia University. Cloth. Price, $9. Pp. 831. Philadelphia: Lea & Febiger, 1926.

This is a marvelously exhaustive summary of all that has been learned about the occurrence and behavior of sulphur and compounds of sulphur in biologic relations. It represents many years of patient search through the literature, of classification and of compilation. It will be invaluable in every laboratory and library where biologic problems are of interest, and constitutes a fitting monument to the memory of the senior author, whose industrious and useful life as a student and investigator in biologic chemistry was sadly terminated while in the midst of the most fruitful part of his career.

UEBER DAS KONGENITALITÄTSPROBLEM DER SYPHILIS. Von Regierungsrat Dr. Carl Hochsinger, Direktor des I. öffentlichen Kinder-Kranken-Instituts. Paper. Price, 2.40 marks. Pp. 53. Berlin: S. Karger, 1926.

Hochsinger, on the basis of lifelong observation, reiterates the view previously expressed by him that syphilis is transmissible through the germinative cells and that intra-uterine infection of the fetus by way of the placenta in the event of postconceptional syphilis of the mother is conceivable under certain conditions but relatively rare. He also restates his position, as a result of careful observation in private patients, that there is a lues congenita of purely paternal or spermatogenic origin in which the mother remains free from evidence of syphilis both clinically and serologically and may later bear healthy children. In this he definitely opposes the view expressed by Matzenauer in 1903 that "without maternal lues there is no congenital syphilis of the child." In support of his view he cites the experimental work of Eberson and others which shows that apparently *Spirochaeta pallida* may exist or break up into minute granular elements which retain their infectivity. He is also inclined to doubt the validity of Colles' law; in a series of sixty-five untreated, asymptomatic mothers of recently born syphilitic infants, he found only thirty-one giving positive serum reactions. He also emphasizes the frequent spontaneous reversal of the positive Wassermann test in untreated so-called Colles' mothers, and therefore does not believe that a positive serum test shortly after birth necessarily signifies that the mother is syphilitic. On the other hand, his contention is that Profeta's law invariably holds good. Hochsinger's views, as well as his citation of cases, should prove of great interest to students of the problem of congenital syphilis.

THE SHEFFIELD OUTBREAK OF EPIDEMIC ENCEPHALITIS IN 1924. The Report of a Sub-Committee appointed by the Medical Advisory Committee of the Local Division of the British Medical Association. Medical Research Council. Special Report Series, No. 108. Paper. Price, 1s. 9d. net. Pp. 73, with illustrations. London: His Majesty's Stationery Office, 1926.

This is a careful report of an epidemic of 301 confirmed cases of encephalitis that occurred in Sheffield, in 1924. It is especially valuable on account of the high character of its authors and consists of (1) an epidemiologic report by F. E. Wynne; (2) a pathologic report by J. S. C. Douglas, and (3) a clinical report by A. J. Hall and A. Gurney Yates. Then there is an appendix on etiology by J. R. Perdrau. Among the many interesting points brought out are the following: In about one half of the cases the primary attack was mild; in one fifth, severe. While in a general way the milder types of primary attack produced the greater number of cases of complete recovery and the more severe attacks produced the cases of nonrecovery and death, there was an important exception; namely, that parkinsonism not infre-

quently followed an extremely mild acute attack. The death rate from the acute attack was above the average in cases with fever and vomiting, and especially high in cases with polyuria and acute mental symptoms. It was lowest in cases with vertigo as the principal symptom. Valuable observations were recorded regarding the prognosis as to the persistence of symptoms. Ocular palsies and vertigo rarely persisted, while mental disorders persisted in a modified way after the acute attack in about half the cases. Sleep disorders tended to persist for long periods and to remain of the type present in the acute attack. Insomnia tended more to persistence than somnolence. Respiratory disorders in the primary attack never persisted but were frequently seen in the late stages associated with nocturnal restlessness and parkinsonism. While the respiratory disorders in the acute attack were more frequent in females and in older persons, the late respiratory disorders were four times as frequent in males, and the average age of the patient was about 15 years. Parkinsonism was more common in males and during the age period from 15 to 35 years; its onset was most commonly from six to twelve months after the acute attack. Evidence that early cases of parkinsonism had a better prognosis than those occurring later did not appear. Five of the sixty-four patients with parkinsonism in the series of 301 cases have already died; many of the cases have progressed, while about half seem to be at a standstill. In sixteen cases reported as encephalitis the diagnosis proved wrong, and seven of these were cases of tuberculous meningitis. There were forty-three deaths, forty of them within two months of the onset. In the appendix, Perdrau reiterates his belief in the theory of Levaditi that the virus of encephalitis is identical with that of herpes simplex.

THE REPRODUCTION OF LIFE. A Handbook of the Science of Reproduction in Nature and Man. By A. J. Cokkinis, F.R.C.S., M.B., B.S. Cloth. Price, $3.50. Pp. 287, with illustrations. New York: William Wood & Company, 1926.

The object of this book is to give the ordinary reader an understanding of human reproduction. The approach is from the comparative side: there are clear and simple presentations of general biologic principles, of human physiology, of the anatomy of plants and animals with especial reference to the reproductive system, and of human development. The point of view, however, and the facts are unnecessarily antiquated for these days of popular science; there are misconceptions as to some fundamental principles, and there are uncalled for outbreaks of sentimentality. These objections dwindle in importance if the first four parts of the book are considered incidental, and if it is realized that in any case the reader who lacks first hand knowledge of living things can obtain only the vaguest ideas concerning them from the printed page. The main topic is well presented, with "sufficient discretion and delicacy" and piety as well. The illustrations are simple line drawings and, in most cases, serve their purpose admirably.

OUTLINE OF ABNORMAL PSYCHOLOGY. By William McDougall, Professor of Psychology in Harvard College. Cloth. Price, $4. Pp. 571. New York: Charles Scribner's Sons, 1926.

The author offers a complete survey of modern trends in psychology together with some consideration of the applications of the newer methods to the study of functional nervous and mental disorders. Readers of the *Archives of Neurology and Psychiatry* will doubtless remember his devastating critique of Freud's "Oedipus Complex." In the present book he provides chapters on the complete freudian concept, and also on the ideas of each of the freudian offshoots. His analysis is succinct and his literary style easily followed. He seems to have found rational ground in this highly involved field. Thus, while he refuses to accept the freudian school in toto, he admits readily the tremendous influence of the freudian conceptions on the trend of modern psychology and physiology. If there is any point especially to be critized in his development of the subject, it is the apparent assignment to Steckel of equal importance with Adler and Jung. The volume will be found a most thought provoking guide to modern psychology, and perhaps one of the most valuable of all the books in its field for the physician.

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits. Books listed in this department are not available for lending. Any information concerning them will be supplied on request.

BÄDER UND KURORTE IN IHRER BEDEUTUNG FÜR DIE PRAKTISCHE MEDIZIN. Von Dr. Hermann Weskott. Paper. Price, 3 marks. Pp. 83. Munich: J. F. Lehmanns, 1926.

On the uses of balneology and resorts in disease.

DER HEUTIGE STAND DER PHYSIOLOGIE DES HÖHENKLIMAS. Von Professor Dr. A. Loewy. Paper. Price, 3.60 marks. Pp. 60, with 13 illustrations. Berlin: Julius Springer, 1926.

The physiologic changes in high altitudes.

THE LIFE AND TIME OF ADOLF KUSSMAUL. By Theodore H. Bast, Ph.D., Associate Professor of Anatomy, University of Wisconsin Medical School. With a foreword by William Snow Miller, M.D., D.Sc. Cloth. Price, $1.50. Pp. 131, with illustrations. New York: Paul B. Hoeber, 1926.

ANNUAL REPORT OF THE SURGEON GENERAL, U. S. NAVY, CHIEF OF THE BUREAU OF MEDICINE AND SURGERY TO THE SECRETARY OF THE NAVY FOR THE FISCAL YEAR 1926. Paper. Pp. 339. Washington: Government Printing Office, 1926.

TRABAJOS EMPRENDIDOS PARA LA PREPARACIÓN DE UN SUERO CONTRA EL ENVENENAMIENTO PRODUCIDO POR EL PIQUETE DE ALACRAN. Por los doctores Carlos León de la Pena e Isauro Venzor. Paper. Pp. 17. Durango, 1926.

LA DIFTERIA EN EL ADULTO. Sus complicaciones. Tesis de Profesorado. Por Dr. Raúl F. Vaccarezza, profesor suplente de clinica de enfermedades infecciosas de la facultad de ciencias médicas. Paper. Pp. 398, Buenos Aires, 1926.

REPORT OF THE DEPARTMENT OF HEALTH OF THE CITY OF CHICAGO FOR THE YEARS 1923, 1924 AND 1925. By Herman N. Bundesen, M.D., Commissioner of Health. Cloth. Pp. 842, with illustrations. Chicago, 1926.

ANNUAL REPORT OF THE SURGEON GENERAL OF THE PUBLIC HEALTH SERVICE OF THE UNITED STATES FOR THE FISCAL YEAR, 1926. Cloth. Pp. 330, with illustrations. Washington: Government Printing Office, 1926.

REPORT OF THE PRESIDENT AND OF THE TREASURER OF THE CARNEGIE CORPORATION OF NEW YORK FOR THE YEAR ENDED SEPTEMBER 30, 1926. Paper. Pp. 99. New York: Carnegie Corporation, 1926.

TRANSACTIONS OF THE TWELFTH ANNUAL CONFERENCE OF THE NATIONAL ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS HELD IN GLASGOW, 1926. Paper. Pp. 140. London, 1926.

TRANSACTIONS OF THE SIXTH BIENNIAL CONGRESS HELD AT TOKYO, 1925. Volume II. Cloth. Pp. 1116, with illustrations. Tokyo: Far Eastern Association of Tropical Medicine, 1926.

FIRST ANNUAL REPORT OF THE PASTEUR INSTITUTE, CALCUTTA FOR THE YEAR 1924. School of Tropical Medicine and Hygiene. Paper. Price, 3s. Pp. 17. Calcutta, 1926.

PROCEEDINGS OF THE TWENTIETH ANNIVERSARY CONVENTION OF THE ASSOCIATION OF LIFE INSURANCE PRESIDENTS, 1926. Paper. Pp. 227. New York, 1926.

LA REACCIÓN DE DICK: 2,270 observaciones personales en la Ciudad de Mexico. Por Carlos Sanchez Mejia. Paper. Pp. 35. Mexico, D. F., 1926.

DIE NIERENKRANKHEITEN IN DER PRAXIS. Von Professor Dr. C. R. Schlayer. Paper. Price, 3 marks. Pp. 101. Munich: J. F. Lehmanns, 1926.

LES PESTILENCES ET LA CONVENTION SANITAIRE INTERNATIONALE. Por Ricardo Jorge. Paper. Pp. 110. Lisbon: Institut Central d'Hygiene, 1926.

TOXICOMANÍAS. Por Dr. Gregorio Bermann, Professor de la Facultad de Medicina de Córdoba. Paper. Pp. 382. Buenos Aires, 1926.

OPERACIÓN DE RENE LERICHE: Tesis. Por Jose Angel Osuna. Paper. Pp. 65, with illustrations. Santiago Papasquiaro, 1926.

O DIAGNOSTICO DAS HEMORRHOIDAS. Por Raul Pitanga Santos. Paper. Pp. 27, with illustrations. Rio de Janeiro, 1926.

REPORT OF THE SECRETARY OF AGRICULTURE, 1926. Paper. Pp. 120. Washington: Government Printing Office, 1926.

HACIA NUEVOS RUMBOS. Por. Dr. Carlos Enrique Paz Soldan. Paper. Pp. 112. Lima, 1926.

Medicolegal

Injury to Wooden Leg Not a "Personal Injury"

(London Guaranty & Accident Co., Limited, et al. v. Industrial Commission et al. (Colo.), 249 Pac. R. 642)

The Supreme Court of Colorado says that, in this proceeding under the workmen's compensation act of that state, the district court affirmed an award of the industrial commission to the claimant for the accidental injury of his wooden leg. But compensation can be awarded for personal injuries only, which means injury to the person. A wooden leg is a man's property, not part of his person, and compensation cannot be awarded for its injury. Therefore, the judgment of the district court is reversed, with directions to disaffirm the award.

Gratuitous Medical Services Element of Damages

(Beckert v. Doble (Conn.), 134, Atl. R. 154)

The Supreme Court of Errors of Connecticut says that an injured person is entitled to recover for medical or nursing services rendered him, even if gratuitous or paid for by a third party, on the ground that, while such service or payment is a gift for his benefit, it is one of the elements of his injury and he is entitled to the benefit of the gift. But this right of the injured party is personal and exclusive. It does not extend to the husband of an injured wife.

Here the court had before it two cases—separate actions brought by a husband and his wife, respectively, after the latter had sustained a fractured hip in consequence of an attack by the defendant's dog. An award of $2,500 damages in favor of the wife is held not excessive; but a verdict for $437.50 in favor of the husband (for $147 for physicians and for medical supplies, and for $26 a week for ten weeks for nursing, plus interest to date of judgment) it is held was erroneous, to the extent that the allowance for nursing included that of five weeks by a daughter 22 years of age, there being nothing to establish or suggest that her father was subjected to any expense or loss by reason of her temporary sacrifice of her employment and the service she rendered. In addition to his expenditures for physicians and medicines, he was entitled to reimbursement for his own time and services devoted to the care of his wife, to the extent of the reasonable worth of his services so rendered, not exceeding the amount for which he could have hired reasonably competent attendance by others. But the husband's right of recovery was limited to reimbursement for expenses incurred by him by reason of his wife's injury.

Electrical Therapeutic and Medical Practice Act

(Larson v. State (Texas), 285 S. W. R. 317)

The Court of Criminal Appeals of Texas, in affirming a judgment of conviction of defendant Larson of violating the medical practice act, says that he testified that he did not practice medicine nor hold himself out as a practitioner thereof, but was an electrical therapeutic, admitting that as such he treated persons afflicted with bodily ills, and charged them for his services in such regard. That he was a practitioner of medicine under Texas laws as construed by the opinions of this court seems clear. As such a practitioner, he was required, by the terms of article 750 of Vernon's Annotated Penal Code of 1916, to register with the district clerk a certificate issued to him by the state board of medical examiners. This he had not done, and was therefore penally liable for such failure, unless this court responded to his contention that the law under which he was convicted was unconstitutional. This the court could not do. If the court understood his contention, his attack was based on the proposition that article 753 of the code, defining what is meant by a bona fide reputable medical school, and stating that such a school is one "whose entrance requirements and courses of instruction are as high as those adopted by the better class of medical schools of the United States, whose course of instruction shall embrace not less than four terms of five months each," is indefinite, uncertain, and also arbitrary. But this court is not able to say that this sets up an arbitrary discrimination between schools, or that it is a character of classification which the legislature cannot make. The constitutionality of the act under consideration has been attacked in many cases, and as often sustained.

There were a number of bills of exception, many of which complained of the rejection of proof that the defendant benefited persons by his treatment. Such evidence could not militate against the question of guilt herein. Nor would proof of the fact that he had filed a diploma with the district clerk affect the question of his guilt when charged with failing to file a certificate issued by the state board of medical examiners of Texas.

On motion for rehearing, the defendant contended that his position in maintaining that the law under which he was convicted was unconstitutional was misunderstood by the court. The material part of his complaint was against that provision of article 4501 of the revised statutes of 1925 which requires an applicant to be a graduate, that is, hold a diploma, from a reputable medical school before being eligible for examination, it being contended that this was discriminatory against one who might be qualified to stand any examination required, although not holding a diploma, and was therefore in conflict with article 14, section 1, of the constitution of the United States, and article 1, section 3, of the constitution of the state of Texas. But the point raised is not by any means a new one, and has been passed on by courts of other states and decided adversely to the defendant. This court thinks that his contention that the law in question is discriminatory and unconstitutional because requiring a diploma before he is eligible for examination is unsound and not supported by the authorities; and the motion for a rehearing is overruled.

Nature of Action for Malpractice and When Barred

(Wetzel v. Pius (Calif.), 248 Pac. R. 288)

The District Court of Appeal of California, third district, in affirming a judgment for the defendant in this action for damages for alleged malpractice, says that the plaintiff, in his complaint filed, Aug. 16, 1923, charged that on or about May 17, 1922, he broke the femur in his right leg, and, relying on the skill of the defendant, employed him to attend to the injury and to give such care and treatment as was usual and necessary in such cases to effect a cure. Continuing, the plaintiff charged that the defendant so negligently and unskilfully conducted himself in attempting to set the leg that the ends of the femur were allowed to overlap, and were not properly joined together, through which the leg became deformed and permanently shortened. A demurrer to this complaint was, beyond question, correctly sustained. The injury occurred much more than a year before the complaint was filed, and the action was clearly barred by subdivision 3 of section 340 of the California code of civil procedure.

To obviate this objection, an amended complaint was filed which alleged a contract of employment extending from the time of the accident and the setting of the bone and continuing until within one year of the filing of the complaint. It was alleged that the contract provided for the setting of the bone and caring for the injury until a cure had been effected. The theory of the amended complaint was that there was a breach of this contract in the failure of the defendant to reset the bone during the term of his employment, and after it became apparent that the injury seemed to require such a remedy. In his amended complaint the plaintiff based his action on this contract. His contention was that, being entitled to ordinary care and skill during treatment though an operation was improper, if during such treatment a condition developed that a physician should with ordinary professional care and skill have discovered and remedied, neglect to do so was actionable, and, if such neglect continued during all the time that the plaintiff was under treatment, an action might be brought, at any time within one year from the time of the patient's discharge, for neglect of such duty. But this contention was mistaken. Actions of this character are not based

on the contract of employment; they sound in tort, and are classed as actions ex delicto. Departures from this rule have never crept into the California cases.

In the case of *Harding* v. *Liberty Hospital Corp.*, 177 Calif. 520, 171 Pac. 98, the rule is decisively reaffirmed in these words:

> Notwithstanding the conflict of authority from other jurisdictions, we are satisfied that it has become the settled rule in California that actions for injuries caused by the negligent acts of another or his agent must be commenced within the period of one year from the date of the alleged injury, and that the fact that the parties stand in contractual relation to each other does not operate to change the rule or extend the time for the commencement of such actions.

This, of course, does not mean that if some new and different act of negligence should occur during the course of the employment, it could not be made the basis of a separate and independent action. The rule stated above is based on the theory that, when an act of negligence, as in this case the improper setting of the femur, causes injury, the cause of action is complete and cannot be split up. The original injury remains the sole cause of action, and subsequent acts which merely aggravate the harm already done, or later developments which frequently add new elements of harm, merely attach themselves to the original cause of action, and do not of themselves become independent causes of action, nor do they revive the cause of action for the original injury, if that has become barred.

A demurrer which was filed to the amended complaint on the grounds, chiefly, that the complaint was uncertain in that it did not state the date on which the femur was first improperly set, and that the cause of action alleged was barred by the provisions of subdivision 3 of section 340 of the code of civil procedure, was properly sustained. Hearing denied by the Supreme Court of California.

Revoked License Not Restored by Pardon

(State v. Hazzard (Wash.), 247 Pac. R. 957)

The Supreme Court of Washington says that this matter, in which it affirms a judgment adverse to the defendant, was submitted to the trial court on a stipulation. The material facts stipulated were that the defendant in 1912 was the holder of a license issued by the state authorizing her to practice the art of healing. In that year she was convicted of manslaughter, and sentenced to the penitentiary. On the strength of the record of conviction, the state medical board revoked her license. She was later pardoned by the governor, the pardon stating that he did thereby pardon her "and restore her to all the rights and privileges she forfeited by reason of her conviction and confinement." After the pardon, she commenced to practice again on the theory that the issuance of the pardon automatically restored the license to practice. Counsel for both sides narrowed the inquiry here to the sole question of whether an unconditional pardon has the effect of restoring to one convicted of a crime a license to practice the art of healing, if the revocation thereof was on the ground of conviction of that crime.

In construing the words of the pardon it must be borne in mind that the state constitution gives only the power to remit "fines and forfeitures," and that the words in the pardon could not be construed any stronger than if it read that the defendant was restored to all she had forfeited by reason of conviction and confinement. The very essence of a pardon is forgiveness or remission of penalty. If the revocation of the defendant's license could be said to be a portion of the penalty provided by law on conviction of the crime of manslaughter, then it might reasonably be argued that the pardon which released from the penalty would return the license. But it was conceded that the revocation of the license was not a part of the punishment provided by law for the crime of manslaughter, for the license might be revoked for the commission of acts amounting to manslaughter, although there were not conviction thereof. It was urged, however, that, when the license was revoked because of the commission of the crime of manslaughter, in effect it was a punishment therefor, since it precluded the defendant from pursuing her profession. Furthermore, it was argued that the pardon required the assumption that the governor had investigated the facts and found that the defendant was innocent of the crime, and that its effect, therefore, was to restore her good character. But to assume that all or even a major number of pardons are issued because of innocence of the recipients is not only to indict our judicial system but requires to be assumed that which we all know to be untrue. The very act of forgiveness implies the commission of wrong, and that wrong has been established by the most complete method known to modern civilization. Pardon may relieve from the disability of fines and forfeitures attendant on a conviction, but it cannot erase the stain of bad character, which has been definitely fixed.

The doctrine has generally been accepted by the courts that a pardon, unless limited, restores one to the customary civil rights which ordinarily belong to a citizen of the state. These are generally stated to be the right to hold office, to vote, to serve on a jury, to be a witness, and, in earlier times, the return of property forfeited by reason of, and punishment for, conviction of crime. But it does not restore offices forfeited nor property or interests vested in others in consequence of conviction.

There is a wide distinction between the right which one, whether felon or free, has to hold his own property against the world, and deny even the state the right to take it from him without compensation therefor, and that other right to practice a profession which demands peculiar qualifications in order to protect the public and requires a license. As to the latter, there cannot be, strictly speaking, an inherent right thereto, if considered apart from the question of qualifications. One qualified in all respects has a right to a license, but one unqualified does not have the right.

Society Proceedings

COMING MEETINGS

Alabama, Medical Association of the State of, Montgomery, April 19-22. Dr. D. L. Cannon, 519 Dexter Ave., Montgomery, Assistant Secretary.

American Association of Anatomists, Nashville, Tenn., April 14-16. Dr. L. H. Weed, Johns Hopkins Medical School, Baltimore, Secretary.

American Association of Pathologists and Bacteriologists, Rochester, N. Y., April 15-16. Dr. H. T. Karsner, School of Medicine, Western Reserve University, Cleveland, Secretary.

American Gastro-Enterological Association, Atlantic City, May 2-3. Dr. John Bryant, 338 Marlborough Street, Boston, Secretary.

American Pharmacological Society, Rochester, N. Y., April 14-17. Dr. E. D. Brown, University of Minnesota, Minneapolis, Secretary.

American Physiological Society, Rochester, N. Y., April 14-16. Dr. W. J. Meek, University of Wisconsin, Madison, Secretary.

American Society for Experimental Pathology, Rochester, N. Y., April 14-16. Dr. E. B. Krumbhaar, Philadelphia General Hospital, Philadelphia, Secretary.

American Society of Biological Chemistry, Rochester, N. Y., April 14-16. Dr. F. C. Koch, University of Chicago, Chicago, Secretary.

American Society of Clinical Investigation, Atlantic City, May 2. Dr. J. T. Wearn, Boston City Hospital, Boston, Secretary.

Arizona State Medical Association, Yuma, April 21-23. Dr. D. F. Harbridge, Goodrich Building, Phoenix, Secretary.

Association of American Physicians, Atlantic City, May 3-4. Dr. F. W. Peabody, Boston City Hospital, Boston, Secretary.

California Medical Association, Los Angeles, April 25-28. Dr. Emma W. Pope, 593 Market Street, San Francisco, Secretary.

Federation of American Societies for Experimental Biology, Rochester, N. Y., April 14-16. Dr. F. C. Koch, University of Chicago, Chicago, Secretary.

Florida Medical Association, West Palm Beach, April 5-6. Dr. Shaler Richardson, 111 W. Adams Street, Jacksonville, Secretary.

Hawaii Territorial Medical Association, Honolulu, May 2-4. Dr. F. J. Pinkerton, 46 Young Building, Honolulu, Secretary.

Kansas Medical Society, Hutchinson, May 3-5. Dr. J. F. Hassig, 804 Huron Building, Kansas City, Secretary.

Louisiana State Medical Society, New Orleans, April 26-28. Dr. P. T. Talbot, 1551 Canal Street, New Orleans, Secretary.

Missouri State Medical Association, Sedalia, May 2-5. Dr. E. J. Goodwin, 901 Missouri Building, St. Louis, Secretary.

North Carolina, Medical Society of the State of, Durham, April 18-21. Dr. L. B. McBrayer, Southern Pines, Secretary.

Oklahoma State Medical Association, Muskogee, May 4-6. Dr. C. A. Thompson, 609 Barnes Building, Muskogee, Secretary.

South Carolina Medical Association, Anderson, April 19-21. Dr. E. A. Hines, Seneca, Secretary.

South Dakota State Medical Association, Huron, May 3-4. Dr. John F. D. Cook, Langford, Secretary.

Tennessee State Medical Association, Chattanooga, April 12-14. Dr. J. F. Gallagher, 810 Bennie-Dillon Building, Nashville, Secretary.

Texas, State Medical Association of, El Paso, April 26-28. Dr. Holman Taylor, 207½ West 11th Street, Fort Worth, Secretary.

Western Physiotherapy Association, Kansas City, Mo., April 8-9. Dr. Charles Wood Fassett, 115 East Thirty-First Street, Kansas City, Mo., Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in America for a period of three days. No foreign journals are available prior to 1921, nor domestic prior to 1923. Periodicals published by the American Medical Association are not available for lending, but may be supplied on order. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).

Titles marked with an asterisk (*) are abstracted below.

Archives of Dermatology and Syphilology, Chicago

15: 1-118 (Jan.) 1927

*Eczema: II. Correlation of Chemistry with Irritability of Skin of Animals Under Normal and Experimentally Induced Conditions. J. V. Klauder and H. Brown, Philadelphia.—p. 1.

Perforating Folliculitis Naris. G. D. Culver, San Francisco.—p. 16.

*Variola: Minneapolis Epidemic (1924-1925). S. E. Sweitzer and K. Ikeda, Minneapolis.—p. 19.

Epidermolysis Bullosa. W. H. Guy, Pittsburgh.—p. 30.

*Stovarsol in Treatment of Syphilis. F. W. Cregor and F. M. Gastineau, Indianapolis.—p. 43.

Ulcus Vulvae Acutum: Case. G. V. Stryker, St. Louis.—p. 54.

Studies on Eczema.—From the results of their studies and from quoted observations of others relative to the rôle that calcium, magnesium, sodium and potassium play in regulating cellular activity, it appears to Klauder and Brown that the maintenance of this equilibrium is intimately concerned with the vegetative nervous system and, in relation to the latter, with the endocrine glands, and can apparently be influenced through altered metabolism of divers origin.

Study of Minneapolis Variola Epidemic.—Various therapeutic remedies were tried in this epidemic and none seemed of value. Two kinds of serum were used without results. Mercurochrome-220 soluble, gentian violet and neoarsphenamine were given intravenously but did not prove their worth. The patient who lived the longest of those with purpuric smallpox, seventeen days, was treated with calcium chloride. Sweitzer and Ikeda emphasize the fact that the best treatment is prevention. This must be accomplished by vaccination and revaccination, as one vaccination does not afford protection for a lifetime; in fact, persons who have had smallpox can get it again. The authors feel that compulsory vaccination and revaccination every seven years would stamp out smallpox.

Stovarsol in Treatment of Syphilis.—Observations made by Cregor and Gastineau show that stovarsol is useful in controlling the clinical manifestations of syphilis and causing serologic improvement, but accurate dosage is yet to be determined. The authors are convinced that the tolerance of stovarsol is high compared to that of other arsenicals. Its efficiency is comparable to that of neoarsphenamine. It appears to be a valuable aid in aborting syphilis.

Archives of Neurology and Psychiatry, Chicago

17: 1-150 (Jan.) 1927

Erectness in Man. W. M. Kraus, New York.—p. 1.

Loss of Righting Reflex in Man: Paralysis Agitans. S. Brock and I. S. Wechsler, New York.—p. 12.

Decerebration: IV. Integrated Reflexes of Brain Stem. L. J. Pollock and L. Davis, Chicago.—p. 18.

*Friedreich's Ataxia in Brothers. T. M. Barrett, Pittsburgh.—p. 28.

Somnolence in Cerebral Neoplasms. C. A. McKendree and L. Feinler, New York.—p. 44.

*Tuberculoma of Brain. W. P. van Wagenen, Rochester, N. Y.—p. 57.

Scheme for Study of Morphologic Constitution in Psychiatry. F. I. Wertheimer and F. E. Hesketh, Baltimore.—p. 93.

Familial Friedreich's Ataxia.—The cases described by Barrett were those of two brothers, full-blooded negroes, each of whom was 8 years of age when the symptoms were first observed. The duration of life, from the time of the onset of the illness, was three years in the case of one brother and seven years in the case of the other.

Incidence of Tuberculoma of Brain.—According to van Wagenen, the incidence of tuberculomas of the brain, as observed in the Peter Bent Brigham Hospital clinic, where patients of all ages with intracranial tumors are received, is extremely low when contrasted with reports in the literature of the subject covering the last forty years. Among a series of 1,000 verified tumors, only fourteen, or 1.4 per cent, have been proved to be tuberculous granulomas. All but three of the seventeen tuberculomas listed have occurred in the cerebellum. The lesions, as proved at necropsy, have been single in the great majority of cases. In six instances the lesion was extirpated surgically, five times from the cerebellum, with death from recurrence of symptoms, usually with a terminal meningitis within three months. Only one patient survived more than a year without local recurrence, this having been an adult with a cerebral tubercle who subsequently died from the effects of an operation for peritoneal tuberculosis. In the other eleven cases, palliative measures alone were carried out, and only one of the patients, a child with a subtentorial lesion which was not removed, remains alive and well now six years later.

Archives of Pathology and Laboratory Medicine, Chicago

3: 1-160 (Jan.) 1927

*Renal Neoplasms in Young Children. M. Wollstein, New York.—p. 1.

*Metastatic Calcifications After Injections of Parathyroid Extract. W. Hueper, Chicago.—p. 14.

Effects of Inanition on Stomach and Intestines of Albino Rats Underfed from Birth for Various Periods. S. P. Miller, Minneapolis.—p. 26.

*Structure of Infectious Splenic Swelling. M. A. Goldzieher, New York.—p. 42.

Aleukemic Myelosis. R. H. Jaffé, Chicago.—p. 56.

Spontaneous Bone and Marrow Formation in Aorta of Rabbit. B. C. Seegal and D. Seegal, Boston.—p. 73.

Quantitative Determination of Ethyl Alcohol in Human Tissues. A. O. Gettler and A. Tiber, New York.—p. 75.

Parasitology of Tubercle Bacillus. W. C. White, Washington, D. C.—p. 84.

Renal Neoplasms in Young Children.—Eighteen primary renal neoplasms in children between the ages of 3¾ months and 6 years are analyzed by Wollstein. They included one spindle cell sarcoma, thirteen adenosarcomas, three leiomyoadenosarcomas and one rhabdomyoadenosarcoma. In all cases, the kidney was sharply limited from the neoplasm by a capsule of compressed renal tissue. While the growth may invade the kidney substance, the fully developed kidney elements do not take part in the new growth, which is entirely embryonal in type. The more solid tumors are more easily removable, because they remain within their unbroken capsule. Four children who survived operation ten months or more had this firm type of tumor. Metastases into the lungs and liver may develop from the firmer, as well as from the softer growths, but they appear less frequently and less early in the former type. One patient survived to adult life, and one is well six years after operation. The growth was a rhabdomyoadenosarcoma in the older girl, and in the younger an adenosarcoma showing more adenomatous than sarcomatous differentiation. The prognosis in cases of primary renal neoplasms in young children is therefore not entirely hopeless.

Metastatic Calcifications After Injection of Parathyroid Extract.—Metastatic calcifications in various organs of a dog were produced by Hueper by injection of overdoses of parathyroid extract. The effect of the hormone on the action of the heart and the circulatory system is the cause of the hemorrhages, thromboses and secondary necroses in several organs. The extreme degree of calcium precipitation in the kidneys leads to a considerable impairment of the function of these organs, which may prove fatal. The dangers connected with the therapeutic use of this hormone, Hueper asserts, make a proper control of the blood calcium absolutely necessary.

Structure of Infectious Splenic Swelling.—A review of the histology of the spleen in infections suggests to Goldzieher a classification into five types: the hyperemic, the septic, the pyemic, the hemorrhagic and the lymphatic. Early in infection there is an injury to the reticulo-endothelial cells of the spleen, consisting of chromatolysis and a breaking up of the reticulum, which is rapidly followed by regenerative cellular proliferation, greatly in excess of the primary injury. The injury to the reticular stroma accounts for the softening, and its regenerative hyperplasia explains the increased consistency

and chronic swelling. Splenic swelling is interpreted as a useful manifestation of defensive mechanism against infections.

Boston Medical and Surgical Journal

196: 43-82 (Jan. 13) 1927

*Physiologic Background for Symptoms of Thyroid Failure: Results of Treatment. C. H. Lawrence, Boston.—p. 43.
*Feeding of Normal Infant at Birth. M. Ladd, Boston.—p. 50.
Pathology of Prostate. J. D. Barney, Boston.—p. 53.
*Chronic Carbon Monoxide Poisoning. W. Richardson, Boston.—p. 57.
Case of Cyanide Poisoning. C. D. Howard, Concord, N. H.—p. 58.
*Toxic Vomiting of Pregnancy: Neurotic Factor. H. J. Cronin and E. A. Sullivan, Cambridge, Mass.—p. 59.

Symptoms of Thyroid Failure.—Lawrence emphasizes four points: 1. The presence of myxedema, certainly as determined by inspection, is not essential to the existence of marked thyroid failure. There is considerable evidence that its presence is fully as dependent on vascular disease as on diminished thyroid function per se. 2. Abnormal fatigability of the body as a whole, or subnormal function of any of its parts, should, in default of demonstrable organic disease, suggest depression of thyroid activity. 3. The presence of such a depression can be determined, in the majority of patients, only by careful tests of vital function, of which the basal metabolism is only one, and the administration of thyroid extract is not often justifiable without the evidences afforded by such tests. 4. Thyroid failure produces symptoms through its specific effects on bodily nutrition, and may be expected to benefit symptoms only to the extent that it can normalize the nutritional level of the body.

Feeding of Normal Infant at Birth.—In Ladd's experience, lactic acid mixtures, cultured or acidulated, do not offer any advantages over sweet whole milk in normal feeding cases, but are of great importance in cases of intestinal indigestion, acute and chronic, and in infectious diarrhea. Whey mixtures have a place, as do fat-free milks, with homogenized olive oil, in certain types of difficult feeding cases. The criteria of successful feeding are to be found in normal digestion, freedom from discomfort, regular and quiet sleep, and steady gain in weight. Unless these conditions are fulfilled, the feeding is not a success no matter how faithfully one has followed his own or some one else's particular methods.

Carbon Monoxide Poisoning.—Richardson reports a case of carbon monoxide poisoning in a man who had bought a new automobile of the sedan type, with an exhaust heater in the back. The heater had caused considerable trouble by getting hot even when the valve was turned off. Furthermore, there were wide cracks in the floor boards through which had come the strong smell of exhaust fumes. The patient drove this car largely in traffic for 10 miles or more every morning and evening and often much farther. He would feel well on getting up, but at about noontime lassitude began coming on, until at night he felt absolutely worn out. This feeling was soon accompanied by a severe, upper half headache. The patient was advised to put away the new car for one week. By the end of the third day the symptoms had entirely disappeared, and he was feeling as well as ever.

Neurosis Causes Toxic Vomiting of Pregnancy.—Cronin and Sullivan report a case of vomiting of pregnancy in which the exciting cause was a neurosis. The usual medical treatment was followed with only partial success until the nervous factor was recognized and treated.

Florida Medical Association Journal, Jacksonville

13: 153-175 (Jan.) 1927

Pyelitis Complicating Pregnancy. I. M. Hay, St. Augustine.—p. 153.
Malocclusion. N. L. Spengler, Tampa.—p. 156.
Synergistic Analgesia. C. J. Heinberg, Pensacola.—p. 159.
The Diabetides. S. A. Folsom, Orlando.—p. 161.
Vincent's Infection. J. C. Inman, Jr., Chattahoochee.—p. 164.

Illinois Medical Journal, Oak Park

51: 1-84 (Jan.) 1927

Preventive Medicine in Pediatrics. A. E. Williams, Rock Island.—p. 27.
Open Treatment of Fracture. M. S. Henderson, Rochester, Minn.—p. 31.
Pathologic Blood Pressures. N. S. Davis, III, Chicago.—p. 38.
*Acute Intestinal Obstruction. K. A. Meyer and W. A. Brams, Chicago.—p. 43.
Renal Insufficiency. N. C. Iknayan, Charleston.—p. 47.
Dental Work Among Insane. A. Goldstein, Chicago.—p. 51.
*Malaria Treatment of "Institution" Paresis. C. F. Read, Chicago; J. Nerancy, Jacksonville, and H. Tucker, Elgin.—p. 54.
*Exophthalmic Goiter. E. L. Jenkinson, Chicago.—p. 56.
*Meningeal Carcinomatosis. M. R. Guttman, Chicago.—p. 62.
Stitch Abscesses. H. H. Cox, Chicago.—p. 65.
Horse Blanket Pin to Be Used on Laparotomy Sponges. A. E. McEvers, Rock Island.—p. 66.
Appendicitis. E. W. Mueller, Chicago.—p. 67.
Blood Transfusion. I. E. Bishkow, Chicago.—p. 69.
Painless Gastric Crisis. M. E. Lichtenstein, Chicago.—p. 71.
Routine Examination of Knee and Foot. P. Lewin, Chicago.—p. 72.
*Bronchial Asthma: Relation to Pulmonary Tuberculosis. M. Lewison and E. B. Freilich, Chicago.—p. 73.
Precipitate Labor in Primipara; Drowned Baby; Resuscitation of Babe. O. J. Baldwin, Chicago.—p. 76.
Prevalent Epidemic of Quackery. B. H. King, Granite City.—p. 77.

Acute Intestinal Obstruction.—Ninety-five cases of mechanical, acute, intestinal obstruction in which operation was performed, are reported by Meyer and Brams. Obstruction was due to postoperative adhesions or bands in 78 per cent. The obstruction occurred from a few months to nineteen years after operation, and the great majority of these cases were free from symptoms until the onset of the actual obstruction. More than half of the obstructions following operations were due either to appendectomy or to a pelvic operation. There was a striking freedom from obstruction following operation in the upper half of the abdomen. A large number followed so-called clean operations. The lower portion of the ileum was involved in 70 per cent of the cases, and the usual location of the obstruction was in the right lower quadrant of the abdomen. A characteristic of the pain was its intermittent, colicky nature in the early stages before peritonitis appeared. Genuine fecal vomiting was never present, but a foul odor and vomitus which was apparently feculant occurred in twenty-five instances. Peristalsis either visible or audible, was present in sixty-seven cases. Roentgen-ray examination was not of great help. The mortality was 41 per cent, and there was a marked increase after the third day. The treatment consisted essentially of gastric lavage and forced administration of saline solution before and after operation. Removal of the obstruction or of the gangrenous area was attempted only when the general condition of the patient was good. Simple enterostomy alone was performed when the general condition was poor, and more detailed operative procedures were left for a somewhat later date after the toxicity was reduced and the general condition of the patient improved.

Malaria Treatment of General Paralysis.—Read et al. report on fifty-nine cases. Four patients died, one of exhaustion and three because of poor physical condition. One case of nephritis and one of hematuria developed. Not one case has thus far developed more than a reduced Wassermann reaction in the spinal fluid. Remissions occurred in eleven cases, 18.6 per cent. Eight men made marked improvement. The stationary cases numbered twenty-one, 35.6 per cent. Three cases failed mentally, concidentally with treatment, or as the result of it.

Roentgenotherapy of Exophthalmic Goiter.—It is Jenkinson's opinion that all cases of exophthalmic goiter without pressure symptoms should be treated by means of the roentgen rays. Most, if not all, cases of exophthalmic goiter can be cured permanently by roentgen-ray therapy. Previous operation is not a contraindication for roentgen-ray therapy. Any hyperfunctioning thyroid should be treated by radiation. The results are not as conclusive as in the exophthalmic type but many can be cured. The amount of irradiation necessary is determined by the metabolic rate. Patients should be examined at intervals following treatment checked by basal metabolism tests.

Meningeal Carcinoma.—In the case cited by Guttman, there was a carcinomatous infiltration of the left suprarenal and the adjacent lymph glands; the ribs, sternum, skull and tracheobronchial glands also exhibited malignant invasion. The brain was slightly edematous, and its coverings showed a carcinomatous pachymeningitis and leptomeningitis. The brain proper was not markedly affected. Nowhere was there any invasion of the cerebral substance proper.

Asthma and Tuberculosis.—Lewison and Freilich report fifty-one cases of asthma associated with pulmonary tuberculosis, with tubercle bacilli present in the sputum, thus disproving the theory that patients with asthma do not have tuberculosis, and that patients with tuberculosis do not have asthma. The most common symptoms besides cough, dyspnea and cyanosis, in asthma cases with pulmonary tuberculosis, are rapid pulse, loss of weight, pain in the chest, fever, night sweats and hemoptysis.

Indiana State Medical Association Journal, Ft. Wayne

22: 1-46 (Jan.) 1927

Precancerous Lesions of Cervix Uteri. F. C. Walker, Indianapolis.—p. 1.
Heart Disease. E. F. Kiser, Indianapolis.—p. 7.
Infections of Nose and Nasal Accessory Sinuses. J. W. Carmack, Indianapolis.—p. 14.
Chronic Lymphoid Leukemia: Three Cases. L. R. Pearson, Indianapolis.—p. 17.
Rabies in Indiana. F. M. Gastineau, Indianapolis.—p. 19.

Iowa State Medical Society Journal, Des Moines

17: 1-38 (Jan.) 1927

Experiences in Neurologic Surgery. A. B. Kanavel, Chicago.—p. 1.
Infections of Hand. A. B. Kanavel, Chicago.—p. 4.
Financial Needs of State Department of Health. H. Albert, Des Moines.—p. 14.
Full Time County Health Unit and Practicing Physician. J. W. Wallace, Des Moines.—p. 16.
Indications for Tonsillectomy. W. F. Bowser, Davenport.—p. 18.
Rupture of Uterus During Labor. O. A. Kellogg, Dows.—p. 22.

Journal of Clinical Investigation, Baltimore

3: 203-463 (Dec. 20) 1926

*Benign Glycosuria Due to Disturbances in Blood Sugar Regulating Mechanism. K. Faber, Copenhagen, Denmark.—p. 203.
*Red Cell Diameter: I. In Health and in Pernicious Anemia. J. R. Bell, F. K. Thomas and J. H. Means, Boston.—p. 229.
*Effect of Increased Heart Rate Due to Injection of Atropine on Oxygen Saturation of Blood of Heart Disease Patients. H. J. Stewart, New York.—p. 241.
*Influence of Previous Salt Regimen on Excretions of Chlorine, Sodium and Potassium During Chloride Concentration Test of De Wesselow. L. Leiter, New York.—p. 253.
*Surface Tension of Blood Serum in Nephritis. L. Leiter, New York.—p. 267.
*Physiologic Response of Circulatory System to Experimental Alterations: III. Effect of Aortic and Pulmonic Stenoses. E. Holman and C. S. Beck, Cleveland.—p. 283.
*Association of Generalized Arteriolar Sclerosis with High Blood Pressure and Cardiac Hypertrophy in Chronic Nephritis. A. Branch and G. C. Linder, New York.—p. 299.
*Effect of Breathing Oxygen-Enriched Air During Exercise on Pulmonary Ventilation and on Lactic Acid Content of Blood and Urine. A. W. Hewlett, G. D. Barnett and J. K. Lewis, San Francisco.—p. 317.
*Calorimetric Studies of Extremities: I. Theory and Practice of Methods. C. Sheard, Rochester, Minn.—p. 327.
Id.: II. Experimental Apparatus and Procedures. R. Kegerreis, Rochester, Minn.—p. 357.
Id.: III. Data on Normal and Pathologic Subjects with Localized Vascular Disease. G. E. Brown, Rochester, Minn.—p. 369.
*Scarlet Fever: I. Amount of Scarlatinal Toxin in Blood. J. D. Trask, New Haven, Conn.—p. 391.
*Id.: II. Relation of Specific Toxemia to Course of Disease. F. G. Blake and J. D. Trask, New Haven, Conn.—p. 397.
*Id. III. Infections with Streptococcus Scarlatinae in Persons with Scarlatinal Antitoxic Immunity. E. E. Nicholls, New Haven, Conn.—p. 411.
*Id.: IV. Postscarlatinal Immunity in Patients Treated with Antitoxin. J. A. V. Davies, New Haven, Conn.—p. 423.
*Effect of Tachycardia on Blood Flow in Dogs: I. Effect of Rapid Irregular Rhythms as Seen in Auricular Fibrillation. H. J. Stewart, J. H. Crawford and A. B. Hastings, New York.—p. 435.
*Id.: Effect of Rapid Regular Rhythm. H. J. Stewart and J. H. Crawford, New York.—p. 449.

Benign Glycosuria.—Faber does not know of any case in which a benign glycosuria has turned out to be true diabetes after it was definitely determined to be a benign glycosuria.

Diameter of Erythrocytes.—Bell and his associates measured the diameter of the erythrocytes of twenty normal persons and of twenty-five patients with pernicious anemia. The conclusions drawn are largely confirmatory of the work of others. They are as follows: Diameters of the red cells of normal persons follow the law of natural frequency. The medians and dispersions of such curves are remarkably alike among different subjects. In pernicious anemia, there is a striking increase in both these functions. This fact is of diagnostic significance in distinguishing between pernicious and other types of anemia.

Effect of Tachycardia on Blood Oxygen Saturation.—Six observations were made by Stewart on five patients with auricular fibrillation and four on four patients with normal rhythm; in one of these, similar observations were made also during the presence of auricular fibrillation. These observations show that in patients with heart disease, tachycardia per se, whether with regular or irregular rhythm, does not change the degree of arterial oxygen saturation. During the time of rapid rate, the degree of venous oxygen saturation is (*a*) unchanged in cases of valvular disease (other than mitral stenosis), irrespective of the rhythm; (*b*) increased (1) in mitral stenosis if auricular fibrillation is present and (2) with uninjured valves if normal rhythm is present; (*c*) decreased in mitral stenosis if normal rhythm is present.

Studies on Chloride Concentration.—The urinary chloride concentration test of de Wesselow was studied by Leiter under controlled conditions on three patients differing in age, general health, type of nephritis and state of renal function. Comparison of results obtained after diets of similar salt content shows a rough tendency for the chloride concentrating power to follow the urea concentrating power and phenolsulphonphthalein output, but does not approach exact parallelism. The hourly excretion of potassium and sodium was followed in two nephritic patients. One had a maximal dropsical tendency, the other a moderate one. During the salt-free dietary periods, administration of potassium chloride decreased the sodium output in both patients. During the salt-containing dietary periods, the test caused the more edematous patient to retain sodium and the less edematous one to lose it. In both patients, the chlorine concentration of the urine depended much more on the daily intake of sodium chloride than on the potassium chloride given in connection with the test.

Surface Tension of Blood Serum in Nephritis.—In three cases of apparently pure lipoid nephrosis observed by Leiter, the surface tension of the serum was abnormally low. In the nephritic cases of other types, it varied, without apparent relation to the tendency to edema or to any other observed factor. Tendency to noncardiac edema in nephritis was found associated regularly with lowered plasma albumin content, but only irregularly with lowered serum surface tension.

Effects of Increased Blood Flow Through Heart.—Holman and Beck assert that an increased flow of blood through the heart is a more effective stimulus to cardiac dilatation and hypertrophy than increased peripheral resistance. It may be inferred, therefore, that any great increase in the size of the heart observed clinically is in greater part due to dilatation and in lesser degree to hypertrophy.

Association of Arteriosclerosis, High Blood Pressure, Cardiac Hypertrophy and Chronic Nephritis.—Branch and Linder report observations on the microscopic examination of the vessels of the kidney and other organs in ten consecutive cases of chronic glomerulonephritis in young persons coming to necropsy after previous clinical observation and functional study for some time in the hospital. Three died of intercurrent infections and seven came to typical nephritic death, six from uremia and one from heart failure. The three cases (children, aged 3, 3 and 14 years, respectively) which terminated by intercurrent infection showed relatively mild but definite, diffusely distributed, glomerular lesions. They were free from hypertension, arteriolar sclerosis or cardiac hypertrophy, demonstrating that glomerulonephritis can develop to a considerable degree without such results. All seven cases that progressed to typical nephritic deaths showed hypertension and neuroretinitis, together with cardiac enlargement, gross in five cases, moderate, but probably definite, in two. These observations accord with the current view that cardiac enlargement in nephritis is the result of hypertension. In six of these seven cases, arteriolar sclerosis of the parenchymatous organs was found at necropsy. The

concurrence of arteriolar sclerosis so frequently with retinitis and hypertension shows that the presence of hypertension in nephritis indicates usually, but not always, a coexisting arteriolar sclerosis. The nonconforming case confirms Volhard and Fahr in showing that arteriolar sclerosis may be absent even when neuroretinitis and hypertension have existed for several months, accompanied by renal insufficiency advancing to uremia.

Effect of Oxygen-Enriched Air on Blood and Urine Lactic Acid.—The increase in lactic acid in blood and urine resulting from measured treadmill exercises was determined by Hewlett et al. A smaller rise of blood lactic acid and a smaller excretion of lactic acid were found when oxygen enriched air was breathed. Excess excretion of lactic acid over the resting level was demonstrated only in experiments in which the blood lactic acid rose to 30 or 40 mg. per hundred cubic centimeters.

Colorimetric Studies of Extremities.—A comparison of data, made by Sheard, on the inherent thermal capacities of extremities in selected normal subjects, three cases of polycythemia and four cases of thrombo-angiitis obliterans (Buerger's disease), shows that there is but little difference, in general, between those in normal subjects and those in cases of polycythemia, but that there is a marked difference between the values in normal subjects and those obtained in cases of Buerger's disease. A study of the rates of elimination of heat at the surface of an extremity, due to conditions of surface circulation, indicates that this rate of heat elimination was found to be from two to five times as great in the case of polycythemia as in the normal subject under similar environmental temperature, and again, about half as great or less in cases of thrombo-angiitis obliterans (Buerger's disease) as in normal subjects.

Amount of Scarlatinal Toxin in Blood in Scarlet Fever.—The amount of scarlet fever toxin found by Trask in the blood of scarlet fever patients during the acute stage of the disease varied between very wide limits. The size and intensity of the local reaction caused by 0.3 cc. of serum from scarlet fever patients in the skin of susceptible persons provides a rough but fairly satisfactory measure of the amount of toxin in the serum. Because of the difficulty of estimating the actual degree of toxemia by clinical observation, a generous excess of antitoxin should be used in the treatment of scarlet fever, if the best results are to be obtained.

Relation of Specific Toxemia in Scarlet Fever to Course of Disease.—The data accumulated by Blake and Trask in this study provide definite indications with respect to the therapeutic use of scarlet fever antitoxin. In the first place, it is clear that antitoxin should be administered as early as possible in the disease in order to check the toxemia during its period of increase. In the second place, it is obvious that patients with incipient septic processes early in the disease are potentially much sicker than those without septic processes. Consequently, these patients should receive more antitoxin, even though they may not appear more severely ill at the moment. In the third place, it is evident that the largest amounts of antitoxin are required in cases presenting severe septic processes in which the rash is still bright. Finally, it is apparent that in late cases with faded rash, little, if any, benefit may reasonably be expected from antitoxin therapy. The observations indicate that *Streptococcus scarlatinae* may have at least two quite different methods of attack, and that the defensive mechanisms of the host against these may be dissociated. Variable combinations of these factors result in different clinical pictures of the disease.

Streptococcus Scarlatinae Infections in Immunes.—Of twenty-one strains of *Streptococcus hemolyticus* isolated by Nicholls from twenty-one unselected cases of acute streptococcus infections, ten were found to be *S. scarlatinae*. Of the ten patients in whom the infection was due to *S. scarlatinae*, five had acute follicular tonsillitis, three had acute pharyngitis, one had peritonsillar abscess, and one had bronchopneumonia. None developed clinical scarlet fever. Nine of these patients had been intimately exposed to scarlet fever. Information on this point was not obtained in the tenth case. Nine gave a negative Dick test either before or shortly after the onset of the infection. A test was not made in the tenth case. Of the eleven patients with acute hemolytic streptococcus infections due to nonscarlatinal streptococci, only one had knowledge of exposure to scarlet fever. None developed scarlet fever. Eight, in whom the test was done, gave a negative Dick test.

Postscarlatinal Immunity After Antitoxin Treatment.—Davies says that the degree of late immunity to scarlet fever developed by patients treated with adequate therapeutic doses of scarlet fever antitoxin during the toxemic stage of the disease appears to be less than that developed by patients who did not receive antitoxin. A correlation exists between the results of the skin tests of immunity to scarlet fever and the antitoxin content of the serum, whether the amount of serum antitoxin is determined by blanching or by neutralization experiments.

Blood Flow During Experimental Auricular Fibrillation.—The blood flow and oxygen saturations of the arterial and of the mixed venous blood have been studied by Stewart et al. during experimental auricular fibrillation in ten normal unanesthetized dogs. It was found that the blood flow decreased from 20 to 62 per cent during auricular fibrillation. The oxygen saturation of the arterial blood was unchanged during auricular fibrillation. The oxygen saturation of mixed venous blood decreased during auricular fibrillation. Following the return of the heart to the normal rhythm, the oxygen saturation of mixed venous blood, and the blood flow, returned toward normal. In one instance in which spontaneous auricular fibrillation persisted, such a tendency was not manifest. The changes described as occurring during auricular fibrillation did not occur in two control experiments.

Effect of Rapid Regular Rhythm on Blood Flow.—The blood flow has been studied by Stewart and Crawford during artificially induced regular tachycardia in normal unanesthetized dogs. It was found that during regular tachycardia the blood flow was usually unchanged. In only one third of the observations was it decreased. During regular tachycardia the oxygen saturation of the arterial blood was usually unchanged, but a small decrease of from 4 to 7 per cent occurred in one third of the observations. In five experiments, the effect of regular tachycardia and auricular fibrillation of the same or comparable ventricular rates was compared in the same dogs. The blood flow was decreased as usual during auricular fibrillation, while in regular tachycardia the blood flow was unchanged, except in one observation.

Medical Journal and Record, New York

125: 77-148 (Jan. 19) 1927

Biologic Methods Against Process of Old Age. E. Steinach, Vienna.—p. 77.
Cancer: VIII. Cell Differentiation. W. Meyer, New York.—p. 81.
Interstitial Keratitis of Dental Infection Origin. G. W. Mackenzie, Philadelphia.—p. 85.
Stomatologic Radiology in Public Hygiene. O. Weski, Berlin.—p. 88.
Function of Valves of Houston. J. F. Montague, New York.—p. 90.
*Uses of Ergotamine. A. M. Hellman, New York.—p. 92.
Complement; Clinical Evaluation. F. Herb, Chicago.—p. 94.
Essential Thrombocytopenic Purpura. H. Koster, New York.—p. 97.
Rational Intravenous Therapy. W. F. Dutton, Amarillo, Texas.—p. 101.
Surgical Aspects of Chronic Prostatitis. W. S. Pugh, New York.—p. 105.
Chronic Disease of Seminal Vesicle and Prostate as Focus in Arthritis and Other Systemic Disorders. J. H. Morrissey, New York.—p. 108.
Hematuria: Diagnosis. A. L. Wolbarst, New York.—p. 112.
Kilduffe's Standard of Cure in Gonorrhea. J. Zollschan, Györ, Hungary.—p. 116.
Sterility in Male: Treatment. L. Neuwelt, New York.—p. 118.
Camillo Golgi, Anatomist and Pathologist (1844-1926). M. Thorek, Chicago.—p. 121.

Uses of Ergotamine.—Ergotamine is, in Hellman's opinion, the most reliable and valuable ergot preparation he has ever used. Its action is powerful and lasting. As with all forms of ergot, its use is contraindicated intra partum except when given directly prior to the incision for a cesarean section. Hellman has used it successfully in doses of 0.5 cc. and 1 cc. by hypodermic injection, and in tablets by mouth, from one to three times a day.

Michigan State Medical Society, Grand Rapids

26: 1-76 (Jan.) 1927

Cardiovascular System in Diseases of Thyroid. C. C. Sturgis, Boston.—p. 1.
Bacterial Food Poisoning. J. C. Geiger, Chicago.—p. 8.
Some Aspects of Obstetric Care. R. S. Siddall, Detroit.—p. 14.
Treatment of Cranial and Intracranial Injuries. M. M. Peet, Ann Arbor.—p. 16.
Traumatic Shock. H. E. Randall, Flint.—p. 19.
Advance in Otolaryngology. H. Hays, New York.—p. 20.
Surgical Anatomy of Gallbladder Region. W. L. Hackett, Detroit.—p. 26.
Deep Roentgen-Ray Therapy. U. V. Portmann, Cleveland.—p. 30.
Reconstruction of Nasal Bridge with Autogenous Rib Cartilage Grafts. W. T. Garretson, Detroit.—p. 36.

New Orleans Medical and Surgical Journal

79: 477-552 (Jan.) 1927

*Treatment of Uterine Fibroids and Bleeding Cases: Radiation Methods. C. F. Burnam, Baltimore.—p. 477.
*Surgical Versus Nonsurgical Management of Placenta Praevia. L. A. Ledoux, New Orleans.—p. 484.
Headache. C. C. Buchanan, Hattiesburg, Miss.—p. 490.
Some Psychologic Aspects of Senile Psychoses. G. P. Boulden, Jackson, La.—p. 496.
Trachoma. H. L. Arnold, Meridian, Miss.—p. 498.
Roentgenologist and Hospital. J. T. Case, Battle Creek, Mich.—p. 500.
Significance of Gastric Symptoms. L. B. Neal, Jackson, Miss.—p. 506.
*Roentgen-Ray Treatment of Epithelioma. G. W. Grier, Pittsburgh.—p. 508.
*Constipation. L. C. Sanders, Memphis, Tenn.—p. 513.
Conservation of Perineum During Labor. P. J. Carter, New Orleans.—p. 516.
Normal and Pathologic Development of Sinuses. J. J. Shea, Memphis, Tenn.—p. 523.
Fracture Followed by Sarcoma, or Sarcoma Followed by Fracture? H. B. Gessner, New Orleans.—p. 528.
Todd Tucker in Muscle Work. E. L. Posey, Jackson, Miss.—p. 532.
Nasal Surgery Under Rectal Anesthesia. E. H. Jones, Vicksburg, Miss.—p. 533.

Treatment of Uterine Fibroids.—Burnam urges that each case should be given most careful consideration and that method of treatment followed which seems logically to meet the necessity of the individual patient. It is a mistake to lay down, or try to lay down, hard and fixed rules. The decreased primary risk of death, and the much less economic disablement, especially in those who must work for a living, are in favor of giving irradiation a first position, especially as it does not in any way make operation more difficult should this finally be necessary. This position may be altered by uncertainty in diagnosis, by complications associated with the fibroid, as well as by other intra-abdominal conditions to which the only treatment that can be applied is operation.

Treatment of Placenta Praevia.—Ledoux has reviewed the treatment employed in sixty-six cases with reference to indications and results. Early diagnosis and prompt treatment are of first importance. All patients should be hospitalized and given general supportive treatment for hemorrhage and shock, and a tight cervical or vaginal pack if hemorrhage is repeated or severe or if transportation at a distance is required; finally, preparations should be made for transfusion. Immediate abdominal section, with the high fundal incision, is best in cases of central and cervical placenta praevia, provided the patient is afebrile and has not been subjected to malicious examinations or manipulations, and the fetus is viable and at term. If the fetal death is recent, abdominal section should be considered. Most cases of marginal placenta praevia are satisfactorily handled by rupture of the membranes, packing or hydrostatic bags; if hospital facilities are lacking or in cases of grave emergency, the pack, the bag, the Braxton Hicks version or version without extraction are indicated. Cesarean section is the ideal method of treatment because blood loss is avoided, trauma is minimized and the danger of infection diminished, with a resultant lessened maternal and fetal mortality.

Roentgen-Ray Treatment of Epithelioma.—Grier asserts that epithelioma of the skin is most successfully treated by an escharotic dose of totally unfiltered radiation. This dose may be given at one sitting or subdivided into two, three or four treatments. If subdivided, the interval between treatments must be so short that there is little loss or none at all between treatments, the effect being practically that of a single dose.

Treatment of Constipation.—In Sanders' opinion, the last measure to be considered in the treatment of constipation is the administration of drugs. The enema habit is also condemned. There are, however, definite indications for drug therapy in all cases in which correction of faulty habits and removal of the cause has not restored the function to normal. The treatment is, first, the removal of the cause; second, the reestablishment of the normal intestinal peristalsis by regulation of habits, diet, exercise and by discontinuing catharsis; third, the use of drugs which are nonirritating, chiefly liquid petrolatum combined with agar, and, in obstinate cases, the temporary addition of cascara or magnesia. In the atonic type of stasis Sanders prescribes a simple fruit mixture. It consists of: cooked prunes (seeded), 1 pound; dried figs, 1 pound; dates (seeded), 1 pound; agar agar, 2 ounces; senna leaves, 2 ounces. This mixture is run through a meat chopper several times until it is thoroughly mixed and pulverized, and then made into a cake, which is in turn cut into blocks 1 inch square. The dose is one block taken at bedtime.

New York State Journal of Medicine, New York

27: 43-102 (Jan. 15) 1927

Abscess of Lung: Medical Treatment. J. A. Miller, New York.—p. 43.
Id.: Surgical Treatment. A. V. S. Lambert, New York.—p. 47.
*Results of Long-Continued Use of Insulin in Diabetes. J. R. Williams, Rochester, N. Y.—p. 49.
Stroganoff's Treatment of Eclampsia; Russian Prenatal and Child Welfare Posters. S. B. Blakely, Binghamton.—p. 51.
Diagnosis of Affections of Hip Joint. A. Krida, New York.—p. 57.
When to Operate for Peptic Ulcer. F. H. Lahey and S. M. Jordan, Boston.—p. 60.
Metabolic Accompaniments of Acute Intestinal Obstruction. H. L. Nelms, Albany.—p. 64.
Activities of Suffolk County Medical Society. W. H. Ross, Brentwood.—p. 66.
Activities of Queens County Medical Society. E. A. Flemming, Richmond Hill.—p. 68.

Results of Long Continued Use of Insulin.—Williams reviews the results obtained from the use of insulin in the treatment of a large number of cases of diabetes that had been under observation sufficiently long to determine the limitations and beneficial possibilities of this treatment. There is a marked increase in food tolerance, body weight and economic efficiency. Of 478 patients, 85 per cent are living. There have been few deaths due to diabetes alone where proper treatment was given. The tenure of life has been extended indefinitely. Increased susceptibility to communicable or other disease has not been noted in any of the cases.

Oklahoma State Medical Association Journal, Muskogee

20: 1-30 (Jan.) 1927

Etiology of Eczema. J. Stevenson, Tulsa.—p. 1.
*Ephedrine in Treatment of Asthma and Hay-Fever. R. M. Balyeat, Oklahoma City.—p. 3.
Hypertension. C. E. Sexton, Stillwater.—p. 8.
Endocarditis and Valvular Diseases of Heart in Children. M. L. Lewis, Ada.—p. 13.
Diseases of Heart and Blood Vessels. O. W. Rice, McAlester.—p. 15.

Use of Ephedrine in Asthma and Hay-Fever.—Balyeat reports four cases of asthma and two cases of hay-fever in which he used ephedrine sulphate to good advantage. The dose varied from 25 to 50 mg., from three to five times daily.

Philippine Journal of Science, Manila

31: 265-429 (Nov.) 1926

Meulen's Catalytic Method for Determination of Nitrogen in Organic Compounds. F. L. Smith and A. P. West, Manila.—p. 265.

Public Health Journal, Toronto

17: 571-624 (Dec.) 1926

Serum Therapy of Exanthemata. J. G. FitzGerald, Toronto.—p. 571.
Rural Community and Nursing Outpost. M. E. Wilkinson, Toronto.—p. 579.
Hieronymi Fracastorii Syphilidis Sive Morbi Gallici. W. R. Riddell, Norwood Grove, Manit.—p. 581.
Seymour Plan of Vaccination. M. M. Seymour, Regina, Sask.—p. 593.
Prevention of Dental Disease and What We May Do to Insure Sound Teeth for Children. E. A. Grant, Toronto.—p. 601.

United States Veterans' Bureau Medical Bulletin, Washington, D. C.

3: 1-106 (Jan.) 1927

Schedule of Classification and Regimen for Tuberculosis Hospitals. P. S. Rawls.—p. 1.
*What May Reasonably Be Expected from Institutional Treatment of Pulmonary Tuberculosis. G. W. Beach.—p. 5.
*Malignant Growths of Larynx. J. M. Love.—p. 11.
*Treatment of General Paralysis by Malaria Inoculation. R. L. Harris.—p. 23.
*Treatment of Neurosyphilis with Tertian Malaria. D. E. Singleton and W. J. Riley.—p. 30.
*Malaria Treatment of General Paralysis. A. Rabinovitch.—p. 36.
*Treatment of Neurosyphilis by Inoculation Malaria. P. B. Matz.—p. 42.
Administration of Discipline in Hospitals. H. C. Watts.—p. 47.
Subcutaneous Emphysema. R. R. Harris.—p. 50.
*Quantitative Kahn Test for Spinal Fluids. A. Lederer and E. Hines, Jr.—p. 52.
Pyorrhea Alveolaris. J. J. Burke.—p. 59.
Von Recklinghausen's Disease: Two Cases. F. Adams.—p. 64.
Ulcerative Tuberculous Colitis: Two Cases. M. R. Stewart.—p. 67.
Combining Curative Work with Vocational Training in Tuberculosis Sanatoria. S. Sample.—p. 88.

Institutional Treatment of Tuberculosis.—Beach says: He that would bring back health from a tuberculosis hospital must carry with him when he is admitted a fair knowledge of his disease, an understanding of what is expected of him in the way of cooperation, and a healthy, vigorous, long-winded will power.

Carcinoma of Larynx.—Love reports a case of far advanced cancer of the cords and one of far advanced cancer of the tongue and epiglottis. Early operative procedure is considered the best method of treatment.

Malaria Treatment of General Paralysis.—Fifteen patients with general paralysis have been inoculated with tertian malaria by Harris. Ten patients show mental and physical improvement; four show physical improvement only and one did not show any improvement. Completely negative blood and spinal fluid examinations were obtained in three; a fourth showed a normal blood and spinal fluid, except for a very slight change in the gold curve, which did not go below two on the chart; improvement in the spinal fluid occurred in seven but did not result in the blood or spinal fluid of four. One patient, who was much improved, is having petit mal attacks nine months after treatment.

Malaria Treatment of Neurosyphilis.—Forty-two patients with general paralysis, seven with cerebrospinal syphilis, and one with tabes dorsalis have been inoculated with tertian malaria by Singleton and Riley. Of the forty-two patients with general paralysis, twenty-two showed improvement, four to the extent that they were able to go back to work. Of the seven cases of cerebrospinal syphilis, six became practically serologically negative. The neurologic condition remained unchanged. In the one case of tabes there had been intensive antisyphilitic treatment for twenty-two months without serologic improvement. Ten months after malaria the patient became practically serologically negative. The nineteen cases unimproved were mostly far advanced. Serious complications have not occurred as a result of treatment. It would seem that the manic and expansive types respond more favorably than the simple dementing type.

Malaria Treatment of General Paralysis.—Thirty-nine patients with general paralysis were inoculated by Rabinovitch with benign tertian malaria, successfully in thirty-seven. Improvement has occurred in 59 per cent.

Malaria Treatment of Neurosyphilis.—Of 112 cases of neurosyphilis treated in United States veterans' hospitals by means of malarial inoculation, Matz says that 65 per cent showed improvement; 33 per cent were unimproved or showed deterioration; 1.7 per cent died. It is believed that the results obtained following this form of treatment justify its continuation and further development.

Quantitative Kahn Test for Spinal Fluids.—A technic is described by Lederer for performing the Kahn test on spinal fluids quantitatively within certain limits. The test can be carried out with as little as 3 cc. of fluid, and does not require more than one and one-half hours. The procedure has the advantage of eliminating the hemolytic system.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

Australian Journal of Experimental Biology and Medical Science, Adelaide

3: 193-236 (Dec. 16) 1926

*Tryptophane Feeding: I. C. S. Hicks.—p. 193.
*Can Cattle Tick (Haemaphysalis Bispinosa) Act as Carrier of Piroplasmosis (Piroplasma Bigeminum)? J. Legg.—p. 203.
*Milk of Monotreme. H. R. Marston.—p. 217.
*Effect of Continued Polyuria on Kidney of Rat. C. S. Hicks and M. L. Mitchell.—p. 221.
Transmission of Australian Poultry Eye Worm. J. W. Fielding—p. 225.
Acceleration of Enzymatic Synthesis of Proteins by Lipoidal Emulsions. H. R. Marston.—p. 233.

Tryptophane Feeding.—Experiments made by Hicks have shown that absence of tryptophane from the diet causes a falling off in heat production commensurate only with starvation wasting. Evidence that tryptophane is required for the elaboration of the thyroid hormone is not demonstrated by measurements of respiratory exchange. The body temperature does not fall, even in the extreme stages of tryptophane-deficient feeding. There is evidence that added tryptophane in a synthetic diet differs in its action from that combined in the protein molecule. It may cause toxic symptoms when increased beyond 2 per cent of the protein fraction. The minimal amount of tryptophane necessary as such in a synthetic diet appears to be in the vicinity of 0.5 per cent of the protein fraction. The optimal amount would appear to lie near the same figure.

Can Cattle Tick Act as Carrier?—The experiments made by Legg point against the possibility of *Haemaphysalis bispinosa* acting as the intermediary in the spread of bovine piroplasmosis *(Piroplasma bigeminum)*.

Milk of Monotreme.—The most primitive milk-producing animals existing are the monotremes, the only two genera of which are represented by the *Echidnidae* (native porcupines or spiny ant eaters) and the *Ornithorynchidae* (the duck-billed platypus). They possess the essential structural characteristics of the mammalia. Their skeleton is distinctly mammalian, though with certain reptilian reminiscences, especially in the limb girdles, and the reptilian condition is still preserved in the fact that the genito-urinary system and the rectum open into a common cloaca. The monotremes retain the most striking traces of their proximate ancestry in their mode of reproduction, as they lay eggs, which they hatch out either in a nest or in an incubatorium pouch, instead of nourishing the fetus in utero by means of a placenta. Marston examined the milk of one young echidna and found that it does not differ in any extraordinary way from that of the higher mammalia; its constituents are the same, and their ratios fall within the limits of those found in the milk of other mammals. The absence of glycerides of soluble volatile fatty acids from the milk-fat is the only peculiarity which does not appear to have been noted in other milks.

Effect of Continued Polyuria on Kidney.—An experimentally sustained polyuria of an extensive degree has been studied by Hicks and Mitchell. Over an experimental period of four months, evidence of impaired kidney function has not been obtained. Histologic examination of the kidney does not show pathologic change, all alteration being within the limits of normal. The arrangement of cytoplasmic granules staining by phosphotungstic acid hematoxylin suggests active resorption from the lumen of the convoluted tubules toward the base of the living cells. The livers of the experimental animals increased to double the normal size and weight as a result of increased vascularity and possibly cell hypertrophy. There is evidence of disturbance in urea formation, the blood ammonia being increased in the four animals so tested to six times the normal figure.

British Medical Journal, London

1: 1-46 (Jan. 1) 1927

*Cancer of Gastro-Intestinal Tract. A. H. Burgess.—p. 1.
*Thyroid Gland in Full-Time Human Fetus and in New-Born Infant I. Murray.—p. 5.
Surgical Treatment of Phthisis and Bronchiectasis. A. T. Edwards.—p. 9.
Macropolycyte. W. E. Cooke.—p. 12.

Prophylaxis in Gonorrhea. K. M. Walker.—p. 13.
Nystagmus in Infant. G. M. Millar and J. A. Wilson.—p. 14.
Symmetrical Hyperkeratosis of Extremities. J. Beatty.—p. 14.
Two-Stage Operations for Cleft Palate. W. Billington.—p. 15.
*Pulmonary Embolism Following Childbirth. J. J. Manning.—p. 15.
*Id. C. G. Salvesen.—p. 15.
Overdose of Hyoscine. S. E. Denyer.—p. 16.

Cancer of Gastro-Intestinal Tract.—Of 50,389 total deaths from cancer in England and Wales in 1923 and 1924, 26,670 were due to cancer of the alimentary canal, excluding the buccal cavity. These cases are analyzed by Burgess.

Relation of Thyroid to Development.—Murray did not find any relationship between the condition of the thyroid in the full-time fetus and the development of the child as reckoned by the extent of ossification.

Pulmonary Embolism Following Childbirth.—Manning's case was one of pulmonary embolism following femoral thrombosis occurring two weeks after delivery. The patient had been getting up for three or four days previously; the day before she had been outdoors for about an hour, and had felt quite well, except for a slight pain in the left groin. On the morning of her death she arose feeling quite well, and while preparing breakfast she suddenly fell down and died in a few minutes.

Id.—Salvesen's patient died of pulmonary embolism on the fourth day of her puerperium.

Heart, London

13: 261-394 (Dec. 23) 1926

*Development of Cardiac Coronary Vessels in Rabbit. R. T. Grant.—p. 261.
*Unusual Anomaly of Coronary Vessels in Malformed Heart of Child. R. T. Grant.—p. 273.
Comparative Anatomy of Cardiac Coronary Vessels. R. T. Grant and M. Regnier.—p. 285.
Innervation of Blood Vessels. H. H. Woollard.—p. 319.
*Rupture of Minute Vessels in Skin. T. Lewis and I. M. Harmer.—p. 337.
*Differences in Vascular Coloration of Various Regions of Normal Human Skin. N. C. Wetzel and Y. Zotterman.—p. 357.
*Congenital Pericardial Deficiency. R. T. Grant.—p. 371.
Vascular Reactions in Man in Response to Histamine. I. M. Harmer and K. E. Harris.—p. 381.

Development of Cardiac Coronary Vessels.—Grant shows that the coronary veins develop from outgrowths of the endothelium lining the left horn of the sinus venosus, and outgrowths from the endothelium lining the auricles and ventricle give rise to epicardial capillaries. The auricular outgrowths connect up with branches of the coronary veins and form the thebesian vessels of the adult auricle. The ventricular outgrowths join with one another and also with branches of the coronary veins. The coronary arteries appear a little later as endothelial sprouts from the base of the aorta.

Anomaly of Coronary Vessels.—An anomaly of a child's heart is described by Grant in which blood-filled spaces in the ventricular muscle communicated freely with the cavity of the ventricle and with the coronary vessels. The malformation is interpreted as a persistence and growth of the intertrabecular spaces of the compact myocardium, which normally are reduced to capillaries.

Rupture of Minute Vessels in Skin.—Clinical tests indicating the strain required to break minute vessels of the skin are described by Lewis and Harmer, and it is shown that this is usually low in cases of subacute infective endocarditis, and always low when spontaneous hemorrhages are occurring. Further illustrations point to a similar defect in the minute vessels in conditions such as pernicious anemia, myeloid and lymphatic leukemia and purpura simplex, in which spontaneous cutaneous hemorrhages are common. The way in which the previously existing condition of the cutaneous vessels may influence the distribution of cutaneous eruptions is discussed.

Differences in Vascular Coloration of Skin.—Wetzel and Zotterman agree with previous workers that the color of the skin is chiefly determined by the superficial venules and not by the anatomic capillaries. Color variations are due to differences in the sizes of the contributing vessels and especially to the differences in the size of the venules of the subpapillary plexuses.

Congenital Pericardial Deficiency.—A large congenital defect of the pericardium was found by Grant at the necropsy on a man, aged 52, dead of carcinoma, who had led an active and hard-working life. The heart itself was small for a man of his height and age, but in keeping with the general emaciation present, and did not show a sign of hypertrophy or dilatation of any chamber. It is concluded that (*a*) absence of the pericardium is not in itself a factor in the causation of cardiac enlargement, and (*b*) under the conditions of normal human life, the pericardium does not play an important part in supporting the heart wall.

Indian Medical Record, Calcutta

46: 367-398 (Dec.) 1926

Epidemic Dropsy. S. M. Banerjee.—p. 367.
Antibodies. A. Roy.—p. 371.

South African Medical Record, Cape Town

24: 513-536 (Dec. 11) 1926

Suppurative Salpingitis. I. P. Schabort.—p. 515.
Measures Adopted in Europe for Control of Venereal Diseases. H. Gluckman.—p. 520.
Teamwork in Diagnosis of Cerebral Tumors. F. H. Kooy.—p. 527.
*Treatment of Pneumonia Among Natives by Sodium Nucleinate. L. E. Miller.—p. 531.

Sodium Nucleinate in Pneumonia.—Miller has treated eighty-seven cases of lobar pneumonia and thirty of bronchopneumonia with injections of sodium nucleinate. There were seven deaths among the lobar group and four among the bronchopneumonia group. Miller injects 0.1 Gm. of sodium nucleinate intramuscularly, to be repeated in forty-eight hours if the temperature is still high. The usual expectant treatment is also given.

Fukuoka Medical Journal, Fukuoka, Japan

19: 57-72 (Dec.) 1926

*Granules of Ganglion Cells in Central Nervous System. N. Suzuki.—p. 57.

Nature of Granules in Ganglion Cells.—Suzuki asserts that the granules found in the ganglion cells of the central nervous system are the result of cell reaction to physiologic stimuli and pathologic irritants. They may be large or small, few or many, and may be stained by many different methods, each of which has given them a designation. But, says Suzuki, in reality there is only one variety of granule.

Journal of Oriental Medicine, Darien, South Manchuria

5: 67-73 (Dec.) 1926

Local Immunity of Abdominal Cavity: Significance of Histiocytes. K. Shimotsuma.—p. 67.
*Morphinism: II. Blood Chemistry of Morphine Addicts. S. Nishigishi.—p. 69.
*Influence of Cold on Animal Organism: I. Changes in Blood Chemistry. S. Yamaguchi.—p. 71.
Pharmacologic Investigation of Round Ligament of Uterus in Rabbit. C. Suzuki.—p. 72.
*Lowering Coagulability of Blood. B. Sawada.—p. 73.

Blood Chemistry of Morphine Addicts.—The blood of six morphine addicts was examined by Nishigishi. During the period of abstinence, the residual and urea nitrogen were normal; the carbon dioxide was slightly diminished; the acetone was slightly increased in amount, and the lactic acid was considerably increased. During the period of habituation, the carbon dioxide is slightly increased; acetone and lactic acid fall to normal values, and the nitrogens remain normal. Serum albumin values remain normal in both periods.

Influence of Cold on Animal Organism.—Yamaguchi asserts that in animals exposed to cold the carbon dioxide is diminished in amount; serum albumin is slightly increased; residual nitrogen, urea, ammonia and amino-acids are lessened in quantity. Blood sugar, acetone and lactic acid show increases.

Lowering Coagulability of Blood.—Sawada concludes that sodium citrate is not usable as a styptic. Small doses prolong the coagulation time; larger doses shorten it—but these doses are toxic, and about 50 per cent of the rabbits used for this observation died a few days after the injection.

Bulletins de la Société Médicale des Hôpitaux, Paris

50: 1719-1740 (Dec. 17) 1926

Congenital Double Stenosis of Aorta. Pilod and Hugonot.—p. 1719.
*Cough, Hemoptysis, Eosinophilia and Polycythemia from Taenia. P. Pagniez and Lerond.—p. 1728.
Tuberculosis of Ileum and Cecum. R. Feissly.—p. 1731.
Empyema from Bacillus Fusiformis and Spirillum. L. Rimbaud.—p. 1738.

Persistent Cough with Hemoptyses, Eosinophilia and Polycythemia, Due to Taenia.—Pagniez and Lerond's patient, a young woman, suffered from violent paroxysms of coughing, which had resisted treatment for six months. They were associated with hemoptyses, testifying to reflex congestive phenomena, probably connected with an existent polycythemia. The latter was not accompanied by cyanosis; it disappeared after expulsion of the worm. There was a considerable increase in the number of eosinophils, which reached as high as 70 per cent of the total leukocytes. The authors are not aware of other cases in which polycythemia was recorded in helminthiasis.

Revista Ibero-Americana de Ciencias Médicas, Madrid

1: 559-609 (Dec.) 1926

*Hyperthyroidism and Resistance to Tuberculosis. D. J. Valdés Lambea.—p. 559.
Tests of Heart Function. A. Mut.—p. 564.
The Heart in General Anesthesia. Ahzo.—p. 570.

Experimental Hyperthyroidism and Resistance to Tuberculosis.—Recent studies have disproved Virchow's and Rokitansky's views as to the rarity of tuberculosis of the thyroid. Neither has Pinoy's conception that the iodine-laden thyroid has power to resist tuberculosis stood the test of time. A dog and three guinea-pigs were fed thyroid by Valdés. All lost weight, and one guinea-pig died with cachexia. When symptoms of hyperthyroidism seemed well developed, the animals were infected with tuberculosis, either intravenously or intraperitoneally. All the animals that had been fed thyroid died long before the controls. A number of culture tests in thyroid and nonthyroid mediums yielded almost identical results.

Archiv für klinische Chirurgie, Berlin

142: 1-791 (Oct. 28) 1926. Congress Number

*Problems of Brain and Spinal Cord Surgery. A. Eiselsberg.—p. 203.
*Surgery and the Function of Organs. E. Rehn.—p. 228.
*Respect for the Tissues at Operation. H. Haberer.—p. 247.
*Treatment of Diffuse Suppurative Peritonitis. Kirschner.—p. 253.
The Development of Surgery of the Large Intestine in the Last Twenty-Five Years. O. Nordmann.—p. 312.
Treatment of Local Anthrax by Blood Injections. Erb.—p. 368.
Determination of the Phosphorus Pentoxide of the Blood in Pulmonary Diseases. Vorschütz.—p. 371.
*The Monthly Cycle of the Mammary Gland. L. Moszkowicz.—p. 374.
Infection and the Nervous System. H. F. O. Haberland.—p. 419.
*The Breakdown of the Circulation in Peritonitis. W. Usadel.—p. 423.
*Prevention and Treatment of Intestinal Paralysis. S. Frey.—p. 445.
Operative Treatment of Mitral Stenosis. B. O. Pribram.—p. 458.
Operative Treatment of Epilepsy. F. Krause.—p. 466.
Late Traumatic Apoplexy. Smidt.—p. 475.
Neurinoma. Guleke.—p. 478.
Operative Treatment of Bronchial Asthma. H. Kümmell, Sen.—p. 499.
End-to-End and Lateral Intestinal Anastomosis. E. Melzner.—p. 505.
*Precancerous Lesions of the Intestine. Schmieden.—p. 512.
*Transplantation of Human Carcinoma. H. Kurtzahn.—p. 520.
Structure and Nature of Carcinoma. C. Ritter.—p. 538.
Influence of Tracheal Stenosis on the Heart and Pulmonary Circulation. E. Sulger.—p. 563.
Rhinoplasty and Stomatoplasty. G. Perthes.—p. 572.
Free Fat Transplantation for Cleft Palate. W. von Gaza.—p. 590.
Osteochondritis Dissecans. F. König.—p. 600.
Amputation of the Foot. Magnus.—p. 603.
Pathologic Physiology of Joints. Seeliger.—p. 606.
Effect of Diminished Circulation on Bone Tissue. W. Müller.—p. 610.
Plaster of Paris as Filling Material for Bone Cavities. Oehlecker.—p. 613.
Aseptic Traumatic Para-Articular Bone Lesions. W. Block.—p. 626.
Supracondylar Nearthrosis of the Knee. A. Stanischeff.—p. 634.
Primary Wound Suture in Compound Fractures. Koch.—p. 640.
Treatment of Fractures of the Leg. Scheffler.—p. 643.
Etiology of Torticollis. A. Schubert.—p. 646.
*Ischemic Contractures. W. Löhr.—p. 658.
*Connections Between Cardiac and Renal Activity. E. K. Frey.—p. 663.
Diagnosis of Cystic Kidney. Grauhan.—p. 670.
The Combined Route in Prostatectomy. Läwen.—p. 678.
Surgical Treatment of Non-Resectable Duodenal Ulcer. H. Finsterer.—p. 683.
*Cholemia. H. Wildegans.—p. 698.
Operation for Postmeningitis Spinal Cord Adhesions. Hohlbaum.—p. 723.
Plastic Operations on Ball-and-Socket Joints. E. Payr.—p. 728.
Diagnosis of Commotio Neuroses. L. Heidrich.—p. 772.

Problems of Surgery of the Brain and Spinal Cord.—In discussing the general symptoms of brain tumors, Eiselsberg mentions that rotation vertigo is important in the diagnosis of tumor of the posterior cranial fossa. A pronounced change in the pulse on change in position is a bad omen in these tumors. While choked disk is scarcely ever absent in acusticus tumors and is lacking in only about 5 per cent of tumors of the cerebellum, it need not be present in tumors of the cerebrum unless they are of very expansive growth, and it is not found in 50 per cent of tumors of the pons. If there are changes in the optic nerve, it is incumbent on the surgeon to operate on the first sign of deterioration of vision. Roentgen irradiation of the choroid plexus in elderly patients seems to exert a favorable influence on the general symptoms of brain tumors, including optic nerve changes. Choked disk developing after jacksonian epilepsy suggests tumor of the surface of the brain; if the order of appearance is reversed, a temporal lobe tumor is more likely. The roentgenogram may show either a thickening or a thinning of the bone over the tumor—the former especially in endothelioma. A pathologic increase in pressure always produces rarefaction of the bone, demonstrable in the roentgenogram. Total destruction of the clinoid processes usually indicates a tumor within the sella turcica; there may be slight bone consumption without local tumor. Backward inclination of the clinoid processes speaks for tumor on the sella or above or in front of it; forward inclination is frequently found with tumors lying caudal to the sella—tumors of the temporal lobe and of the cerebellum as well as of the pontile angle. Homolateral ptosis, with or without contralateral paresis of the extremities, may aid in the diagnosis of tumors of the right side of the temporal lobe. A tendency to fall forward speaks in favor of tumors of the superior vermiform process of the cerebellum; backward, of tumor of the inferior vermiform process. Eiselsberg found bradyphasia with slight scanning more common in bilateral than in unilateral cerebellar lesions. Tumors of the fourth ventricle may lie latent for decades, then suddenly excite severe symptoms, suggestive at first of hysteria. Forward inclination of the head and vertigo on change of position are characteristic of these rare tumors. Eiselsberg summarizes the statistics of his clinic and discusses the technic of operation on the brain and spinal cord. He emphasizes the necessity for the most minute hemostasis, according to Cushing, before closing the wound after brain operations, which, he says, requires great self-discipline on the part of the surgeon.

Surgery and the Function of Organs.—Rehn discusses constitution in relation to surgery. The embolic subject is corpulent, broadly built and rather short, with a slightly bloated appearance. He is fairly well developed muscularly, except in the abdominal walls and shoulder girdle. The lower extremities are not so well developed as the rest of the body. His skin is remarkably white and soft. The blood presents heightened coagulability. In patients of this type the danger of thrombosis and embolism should be countered by energetic active or passive exercise before and immediately after the operation, followed by absolute rest in bed for from fourteen to twenty-one days, with free use of sedatives. Vagotonia, with its general lowering of resistance and its tendency to produce bradycardia, respiratory arrhythmia, vomiting and spastic constipation, is, from the surgical point of view, the most unfavorable of the constitutional anomalies of the vegetative system. Calcium should be used before operation to combat the liability to shock in the vagotonic patient. Where there is lability of the electrolyte equilibrium vasomotor collapse may be brought about by the toxic action of a narcotic on the circulation and heart. Such lability is likely to be present in chronic inflammatory diseases of the biliary tract and in hepatic disease. In metabolic disturbances and lability of the blood plasma there is great sensitiveness to sodium chloride solution; in these conditions serum salt with dextrose solution should be used instead. Rehn strongly recommends cardiac stimulants before operation, and calcium chloride urea as a preventive of capillary

bronchitis and bronchopneumonia. In the case of vagotonic subjects it is better to give intravenous injections of calcium to restore the cation disequilibrium than to depend on local and alimentary acidification. In childhood, disturbance of the acid-alkali balance is a more serious matter; the acidosis to which there is a natural tendency in the new-born and in badly nourished children may easily reach a dangerous height after an operation. The metabolism of children with rickets, spasmophilia and the exudative diathesis must be given special attention, should it become necessary to submit them to surgical treatment.

Respect for the Tissues at Operation.—Haberer fears that in the complexities of modern technic and in the pursuit of solutions to disease problems the surgeon will lose sight of the necessity for gentle handling of the tissues. This elementary matter is one of the main pillars of successful surgery. Many cases of adhesions, many postoperative pneumonias (especially after abdominal operations) are due to insufficient care in this respect.

Treatment of Diffuse Suppurative Peritonitis.—With the exception of the gonococcus and pneumococcus varieties, the source of infection should be at once sought out and removed in every case of diffuse suppurative peritonitis that is still operable. The exudate should be removed by flushing with physiologic solution of sodium chloride if the inflammation has extended evenly over the entire abdominal space, by swabbing if it is circumscribed. Kirschner advises against filling the cavity with a medicinal fluid; nor does he approve of mechanical emptying of the intestine during the operation, of the primary establishment of an intestinal fistula or of free drainage of the abdominal cavity; only foci of infection not completely removed should be drained. He prefers the horizontal to the semierect position after operation.

The Monthly Cycle of the Mammary Gland.—Moszkowicz confirmed Rosenberg's observation of a menstrual cycle for the mammary gland. The tissue in which the periodic changes were observed was, mainly, the "mantle tissue," which is a soft, loose tissue enveloping the lactiferous ducts. His observations bring him to the conclusion that, throughout the child-bearing age of woman, the parenchyma of the mammary gland is in a state of incomplete differentiation of its mesenchymal and ectodermal elements. There are facts which point to the ovary as the source of hormonal influences that inhibit the growth and maturing of the tissue.

The Influence of Intestinal Peristalsis on the Portal Circulation.—The breakdown of the circulation in general peritonitis is not due primarily to cardiac insufficiency. It is brought about by failure to act on the part of the vasomotor system, which, in turn, is the result of a disturbance in the circulation. It has been noted that the fall in blood pressure followed promptly on the appearance of meteorism. Usadel demonstrated by animal experiments that intestinal peristalsis is an important influence in maintaining the vigor of the portal circulation. In early and energetic encouragement of peristalsis we have an effective measure for preventing the breakdown in this system, which terminates in "bleeding to death into the abdominal veins."

Prevention and Treatment of Intestinal Paralysis.—Frey experimented on cats and found that the empty intestine was not more predisposed to postnarcotic, postoperative or peritonitic paralysis than was the full intestine. The reaction of the empty paralytic intestine to pharmacologic stimuli was not weaker than that of the full intestine; this was the same whether the paralysis was caused by narcosis, operation or peritonitis. Nor was paralysis of the empty intestine more difficult to overcome by peristalsis-exciting remedies than that of the full intestine. By full is meant a condition not exceeding normal filling. It would appear that the influence of the intestinal contents in exciting peristalsis is not so great as has been thought and that the motility of the intestine is, in the main, regulated automatically from nervous centers (Auerbach's plexus). The experiments remove objections that have been raised to the practice of emptying the gastrointestinal canal as completely as possible before operations.

Polyposis of the Intestine.—Schmieden insists that microscopic study of a biopsy specimen must yield the final decision as to the surgical treatment. He presents a histologic scheme by which to judge of the precancerous nature of the individual case. The degree of absence of differentiation is the indicator. The usual view of intestinal polypi is much too optimistic. Every carrier of true polypi is in grave danger. In certain cases of generalized polyposis, with a microscopic biopsy picture warning of imminent carcinomatous degeneration, total extirpation of the colon is the logical treatment. In his clinic, 60 per cent of all carcinomas of the rectum were proved to have originated in polypi. He considers that roentgen-ray treatment of polyposis does not have a sound logical basis.

Transplantation of Human Carcinoma.—Kurtzahn allowed three pieces of fresh breast cancer tissue, obtained at operation, to be inserted under the skin of his thigh at certain distances apart. The implants died and were absorbed. The reaction of his organism to the implanted cancer tissue did not differ clinically or histologically from the usual reaction to homoplastically implanted normal epithelium. In each of a number of cancer patients he injected from 5 to 10 cc. of serum obtained from himself after the implantation. The result was negative for any effect related to immunity.

Etiology and Pathogenesis of Ischemic Contracture.—Löhr produced experimental permanent ischemic contractures in a large number of old and young dogs, rabbits, guinea-pigs, rats and mice, by producing smooth, simple fractures, with hematomas, and by replacing constricting fasciae and tense skin by elastic rubber bandages. He avoided injury to the nerves. He considers the subfascial or subcutaneous hematoma as of the utmost importance for the origin of ischemic contracture. He made microscopic examination in fresh and old cases and observed zones of living muscle surrounding necrotic areas. He explains these pictures by swelling of the muscle substance with consequent pressure by the rigid fasciae, leading to functional disturbances in the vessels and finally to death of the central portions of the belly of the muscle. This explains the clinical observation that in all but the most severe cases remnants of muscle remain, which well repay care. He explains the progress of the disease by changes in the smaller vessels and nerves. His histologic studies show that, where ischemia is threatened, rapid action should be taken to restore the circulation before paralysis appears, and that even in late cases of contracture all possible measures should be used to improve the circulation in the muscle and stimulate nerves susceptible of regeneration.

Connections Between Cardiac and Renal Activity.—Frey found that the carotid pulse curve of the dog underwent characteristic alterations on intravenous injection of 3 or 4 cc. of urine. The type of change was the same whether the dog's own urine was used or urine from another mammal or from man. Moreover, the reaction in the rabbit was similar to that in the dog. The amplitude of the pulsations increased, they became more rapid, the blood pressure sank. In from one to two minutes the pulse curve and the blood pressure returned to normal. Efforts to isolate the urinary constituent responsible for the phenomenon have not succeeded. It does not belong to any of the great classes of organic combinations. It is present in the blood, but in much lower concentration. It is found in increased quantity in the urine of professional pugilists immediately after a fight. When diseased, the ability of the kidney to concentrate the substance is diminished.

Experimental and Clinical Studies in Cholemia.—Wildegans studied the effect of bile in the blood on thrombin and fibrinogin. He induced cholemia in dogs by occlusion of the common bile duct and found that three or four weeks thereafter the thrombin content of the blood sank considerably, while the fibrinogen index changed but little. He investigated the constituents of the blood in thirty patients with diseases of the liver and biliary tract and obtained results similar to those of the experiments. In well advanced cholemic icterus of two or three weeks' standing there was a deficiency of thrombin, but not of fibrinogen. He found that thrombin deficiency paralleled hepatic insufficiency and suggests that the latter is responsible for the former. His conclusions for clinical use are that in cholemia the thrombin in the blood should be determined quantitatively, to show whether the liver has already sustained damage, and that if the activators

are deficient blood transfusion should be performed to keep the thrombin content of the blood at a sufficiently high level until the organism has had time to mobilize its own forces after removal of the obstruction to the bile flow.

Deutsche medizinische Wochenschrift, Berlin

52: 2061-2102 (Dec. 3) 1926

Neuroses. R. Wollenberg.—p. 2061.
Psychanalysis. J. H. Schultz.—p. 2063. C'td.
Synthalin Treatment of Diabetes. E. Frank et al.—p. 2067. C'td.
*Age Predisposition to Avitaminoses. L. F. Meyer.—p. 2070.
Surgery of Hallux Valgus. J. Fessler.—p. 2072.
Curettement in Outpatients. F. von Mikulicz-Radecki.—p. 2074.
Quinhydrone Electrode. H. Runge and O. Schmidt.—p. 2077.
Leukocyte Counts. V. Schilling.—p. 2078.
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Contagiousness of Scarlet Fever. E. Bernhardt.—p. 2078.
Treatment of Septic Meningitis. K. Schmidt.—p. 2079.
Apiolum Viride as Abortifacient. G. Joachimoglu.—p. 2079.
Obstetrics in Rural Practice. W. Lenz.—p. 2080.
Phlorhizin Test. J. Levy.—p. 2081.
Asepsis in Obstetrics in General Practice. H. Kritzler-Kosch.—p. 2081.
By-Effect of Merbaphen. Reiche.—p. 2082.
The "Ups Syringe." P. Heymann.—p. 2082.
Gauze bandage. O. Goldstein.—p. 2083.
Instrument for Massage. P. Leopold.—p. 2083.
Lipoids in the Serum of the New-Born. Rosenthal.—p. 2083.
Chemotherapy. R. Schnitzer.—p. 2084.
Typhoid Epidemic in Hanover. M. Hahn.—p. 2084.
Reform of Medical Examinations. F. Schieck.—p. 2087.

Age Predisposition to Avitaminoses.—Meyer confirms the maximum incidence of infantile scurvy (Möller-Barlow's disease) in the eighth month of life. It becomes rare in the second year and it has never been observed before the fifth month. The gums bleed only if the teeth are visible. The lower extremities are more affected than is the rest of the body. Keratomalacia is not dependent on the age. Rickets is certainly rare in the first two months, except in prematurely born infants, who may have craniotabes at the end of the first month. Wieland has shown that rickets is localized chiefly in those bones which are growing rapidly at the time when the disease begins. Hence the predilection for the skull in the first six months and the changes in the thorax later. The extremities begin to be affected at the same time as the thorax and their normal development suffers greater and greater impairment up to the third or fourth year.

52: 2103-2146 (Dec. 10) 1926

Neurotic Structure in Gastro-Intestinal Diseases. V. v. Weizsäcker.—p. 2103.
Psychanalysis. J. H. Schultz.—p. 2105. C'cn.
*Synthalin Treatment. E. Frank et al.—p. 2107. C'cn.
Sterility and Fecundation. M. Samuel.—p. 2108.
Roentgen-Ray Castration in Adnexitis. G. H. Schneider.—p. 2110.
Suprarenal Hirsutism and Virilism. H. Strauss.—p. 2112.
*Superinfection After Latent Syphilitic Infection. P. Manteufel and A. Richter.—p. 2113.
*Problems of Circulation. J. Plesch.—p. 2117.
Spontaneous Cure of Cancer. H. Kohn.—p. 2120.
*Menstruation and Suicide. M. Steiner.—p. 2120.
Leukocytes and Serotherapy. E. J. Feilchenfeld and H. Lehfeldt.—p. 2121.
*Autohemotherapy of Influenza. P. Ludewig.—p. 2121.
Technic of Blood Transfusion. Robert.—p. 2122.
Phytobezoars in Man. H. Hamdi.—p. 2122.
Tubercles of the Choroid. Brunthaler.—p. 2124.
Eye Injury from Indelible Pencil. W. Feilchenfeld.—p. 2124.
Vaccine from the Second Day. E. Paschen.—p. 2125.
Congenital Megacolon and Vestibular Anus. P. Hirsch-Mamroth and S. Cohn.—p. 2125.
*Arsenic Poisoning and Purpura from Wallpaper. K. Tiling.—p. 2126.
*Gynecomasty After Loss of Testis. Tellgmann.—p. 2127.
Chemotherapy. R. Schnitzer.—p. 2127. C'tn.
Placement of Norms. W. Weygandt.—p. 2128.
Venereal Diseases in Schoolgirls. v. Brunn.—p. 2129.
Abortion and Some Penal Codes. H. von Hentig.—p. 2129.
Proprietary and Secret Remedies. Zernik.—p. 2130.
Modeling in the Teaching of Anatomy. Friedel.—p. 2130.

Synthalin Treatment.—Frank, Nothmann and Wagner regard synthalin as valuable in light and moderately grave cases of diabetes in older people. Such patients are, as a rule, comparatively resistant to insulin; one unit of insulin hardly removes 1 Gm. of sugar from the urine. The necessarily large amounts of insulin are almost six times more expensive than synthalin. The latter can be used as a substitute for from 40 to 60 units of insulin. The preparation should not be used in precomatose conditions or in coma.

Superinfection After Latent Syphilitic Infection.—Manteufel and Richter induced typical chancres by reinfecting rabbits three months after a primary syphilitic infection which had remained latent. The latent infection does not induce a positive Wassermann reaction in the rabbit.

A Few Problems of Circulation.—Plesch presses against the liver region and observes the jugular veins. They swell immediately, but in healthy subjects collapse again after a few seconds. In people with weak hearts they remain filled as long as the pressure on the liver lasts. Plesch believes that the mitral ostium never can dilate sufficiently to cause relative insufficiency. Such insufficiency is due to the dilatation of the ventricle, because the papillary muscles and tendons do not become prolonged proportionately and the valves do not touch.

Menstruation and Suicide.—Among Steiner's thirty-nine suicides in women, eleven occurred just before and eleven during menstruation, a proportion of more than 50 per cent of his material.

Treatment of Influenza.—Ludewig recommends autohemotherapy in influenza.

Arsenic Poisoning and Purpura from Wallpaper.—Tiling's patient, a physician, felt tired for about a year. His feet were cold. Later on purpura appeared repeatedly. At times he had pains in the abdomen and once a transitory amaurosis. A few drops of solution of potassium arsenite caused an exacerbation of the purpura. The patient requested chemical examination of a sample of the wallpaper, which had been painted green about five years before. It contained a large amount of arsenic; the patient's hair also gave a strong reaction.

Unilateral Gynecomasty After Loss of Testis.—Tellgmann's patient was a young man who developed a unilateral gynecomasty. He had lost the homolateral testis by an injury suffered in childhood.

Klinische Wochenschrift, Berlin

5: 2289-2336 (Dec. 3) 1926

*Diphtheria Problems. R. Degkwitz.—p. 2289.
*Tuberculous Infraclavicular Infiltrates. R. Klingenstein.—p. 2295.
*Ligation of Pancreatic Duct. G. Herxheimer.—p. 2299.
Injury from Roentgen-Ray Examination. M. Schubert.—p. 2302.
Action of Mineral Waters. L. Fresenius and K. Harpuder.—p. 2304.
Thyroid Preparations. A. Rainer.—p. 2306.
Inulin Fermentation by Streptococci. E. Berger and W. Silberstein.—p. 2307.
Blood Clotting and Sedimentation. R. Cordua and H. Hartmann.—p. 2309.
Formation of Lipoid-Auto-Antibodies in Syphilis. R. Brandt et al.—p. 2311.
*Innervation of Pars Intermedia of the Pituitary. A. Schürmeyer.—p. 2311.
*Vermis Cerebelli and the Blood Sugar. F. H. Lewy and T. Shinosaki.—p. 2312.
Interrenalism. E. Mathias and E. Petzal.—p. 2313.
Congenital Syphilis and the Eye. J. Igersheimer.—p. 2314.
Experts in Hospital Matters. Alter.—p. 2318.
Statistics. K. Freudenberg.—p. 2334.

Diphtheria Problems.—Degkwitz believes that diphtheria bacilli change from time to time by mutation into a more virulent form. Nevertheless, those persons who have acquired immunity to the less virulent form—which is prevalent now—are immune to the mutant. Toxin-antitoxin immunization is not dangerous if the proper precautions are taken.

Tuberculous Infraclavicular Infiltrates. — Klingenstein emphasizes the surprising slightness of the physical signs caused by infraclavicular infiltrative tuberculous foci in the lungs. Here the roentgen-rays furnish the only reliable diagnostic method. These foci are comparatively benign, even if they develop into a cavity. Pneumothorax should be used in time to prevent spreading of the infection.

Ligation of Pancreatic Duct.—Herxheimer continued his investigations, begun in 1909, on the results of ligation of pancreatic ducts. He found again a marked proliferation of the islands in the otherwise atrophic pancreas of a fowl. Examination was made thirty-six days after ligation of the ducts. The blood sugar was as low as 0.019 per cent and the bird had hypoglycemic convulsions. The gland contained about five times as much insulin as normal.

Innervation of the Pars Intermedia of the Pituitary.—Schürmeyer concludes from his experiments on frogs that the pars intermedia of the pituitary can be stimulated by an injury to the floor of the third ventricle. On injury to this region, it immediately secretes the substance which acts on the melanophores.

Vermis Cerebelli and the Blood Sugar.—Lewy and Shinosaki observed a case of diabetes in a child who did not have marked changes in the pancreas, but had suffered from a grave encephalitis affecting the vermis cerebelli. They induced hyperglycemia in dogs by superficial injury to the vermis of the cerebellum. It seems that such a lesion lies in the afferent path of the nervous sugar-regulating apparatus.

Klinische Wochenschrift, Berlin

5: 2337-2384 (Dec. 10) 1926

*Fatigue and Recuperation. E. Simonson.—p. 2337.
*Biliary Acids. E. Enderlen et al.—p. 2340.
*Ultraviolet Rays and C Vitamin. P. Reyher.—p. 2341.
*Malaria Treatment of Syphilis. Mulzer.—p. 2347.
*Ovarian Hormone in the Blood. E. Fels.—p. 2349.
Diatheses of Children. P. Tachau.—p. 2352.
Iodine in Exophthalmic Goiter. A. Hellwig.—p. 2356.
Biochemistry and the Nervous Centers. H. Gorodissky.—p. 2357.
Streptococcus Infection and the Reticulo-Endothelial System. N. Louros and H. E. Scheyer.—p. 2358.
Pubertas Praecox. E. Stransky.—p. 2358.
Diseases of the Biliary Passages. J. H. Bernstein and I. W. Held.—p. 2360.
Insulin and Water Metabolism. O. Klein.—p. 2364. C'td.

Fatigue and Recuperation.—Simonson determined the amount and duration of the increase in metabolism after exertion. The more rapidly the lactic acid formed during work is oxidized, the quicker the recuperation. Poisons that inhibit oxidation—sulphur, for instance—prolong fatigue. Small doses of alcohol have a favorable influence in fatigue of isolated muscles as well as in fatigue of the entire organism. For instance, recuperation was complete within three minutes after work in a person who took 5 cc. of alcohol. In the same subject, one sixth of the lactic acid formed was still present after the same length of time, when the experiment was repeated without administration of alcohol. Thyroid extract also accelerates recuperation. Training acts in a similar way. The determination of respiratory metabolism helps in the solution of the problem of how much recuperation time is necessary and how often it is needed. For instance, according to Zuntz and Schumburg, the respiratory quotient drops below 0.7 after several days of marching. This indicates a depletion of the carbohydrate reserves of the body and extensive formation of carbohydrate from fat and proteins. These authors suggested the insertion of a day of rest after, at most, every three days of marching.

Biliary Acids.—Enderlen, Thannhauser and Jenke's experiments indicate that the excretion of bile acids in the dog is absolutely independent of the amount of cholesterol or oxidation products of cholesterol administered. They conclude that the organism is able to synthetize these hydro-aromatic ring compounds resembling terpenes. The disappearance of fat in dogs with biliary fistulas might indicate that fat is used as material for the synthesis of biliary acids.

Ultraviolet Rays and C Vitamin.—Reyher, working with Meller, found that the ozone formed during production of ultraviolet rays causes an impairment of the odor and taste of milk ("jecorization") and completely destroys the antiscorbutic potency of the milk. The vitamin A is probably also destroyed by it. The impairment of the quality of the milk was partly prevented when the milk was irradiated in quartz vessels from which the oxygen was removed. He doubts the possibility of the cure of rickets by ultraviolet rays alone—without proper feeding.

Malaria Treatment of Syphilis.—Mulzer finds that malaria treatment of syphilis—especially of its later stages—is more efficient than chemotherapy. The treatment is innocuous, if the patients are carefully watched. Heart diseases, pulmonary tuberculosis, nonsyphilitic nephritis and advanced syphilitic aortitis are the only contraindications. It is always advisable to test the patient for quinine idiosyncrasy before instituting the malaria treatment. Many of the patients lose considerably in weight—between 5 and 12 Kg., but the best results were obtained in such subjects. The treatment is essential in patients with changes in the cerebrospinal fluid.

Ovarian Hormone in the Blood.—Fels observed in the blood of pregnant women, beginning at the sixth month, a considerable increase in the ovarian hormone. It may be produced by the placenta.

Monatsschrift für Kinderheilkunde, Leipzig

34: 97-192 (Nov.) 1926

Varicelloid Zoster. E. Lauda and D. Stöhr.—p. 97.
Physiologic Changes in Serum Globulin in Children. H. Süssmann.—p. 114.
Pneumonia in Childhood. P. Heim.—p. 129.
Bilateral Chylothorax and Spontaneous Pneumothorax. G. Remé.—p. 135.
Postinfluenzal Disease of the Myocardium. K. Klinke.—p. 139.
Changes in Gas Metabolism in Childhood and Puberty. H. Schadow.—p. 145.
*Sensitization to Ultraviolet Rays. K. Lakschewitz.—p. 159.

Sensitization of the Organism to Ultraviolet Rays.—Lakschewitz administered eosin perorally to rachitic children and irradiated them with ultraviolet rays. The reaction to the rays was not affected by the eosin. He concludes that it is not possible to sensitize the organism to ultraviolet rays.

Münchener medizinische Wochenschrift, Munich

73: 2057-2102 (Dec. 3) 1926

*Fever from Food, Thirst and Crying? H. Rietschel.—p. 2057.
*The Ear and the Trifacial Nerve. W. Uffenorde.—p. 2064.
*Dealbumination of Urine. I. Abelin.—p. 2066.
Etiology of Pemphigus. Felke and Nagell.—p. 2067.
Cold Feet as Cause of Disease. A. Brauchle.—p. 2068.
Pathogenesis of General Paralysis. H. Kaltenbach.—p. 2070.
Stimulus Theory and Gynecology. A. Theilhaber.—p. 2071.
Raw Food. A. Hartmann.—p. 2073.
Lumbar Puncture. E. Trautmann.—p. 2075.
The German Pharmocopeia. C. Bachem.—p. 2076.
Expert Testimony in Paternity Questions. J. Guggenberger.—p. 2079. C'cn.
Philipp Karel. A. Lüüs.—p. 2083.
Drainage of the Abdominal Cavity. A. Krecke.—p. 2083.

Fever from Food, Thirst and Crying?—Rietschel concludes from his experiments that the increase in temperature observed in thirsty children and even in adults, especially on exertion or when a food rich in proteins or salt has been eaten, is a mere hyperthermia. It is only a disturbance of the regulation of heat due to insufficient perspiration because of the lack of water; it is not a central disturbance of thermoregulation. Only the latter should be called fever. It has been usually forgotten that a thirsty infant cries and is restless. This increases the heat production and the temperature rises still higher. If the new-born infant does not suck well or if the breast does not contain enough fluid, the thirst may cause considerable hyperthermia, which is further increased, as mentioned, by restlessness. An infant—or adult—with an infectious disease needs much water; otherwise his temperature rises unnecessarily high and he decomposes much of his body substance in order to get the water resulting from the oxidation. This applies especially to "salt-fever." If he is given more than the necessary minimum of proteins, their specific dynamic action also raises heat production. In infants with high fever, L. F. Meyer tried the water-carbohydrate diet recommended by Hippocrates. Almost two thirds of the infants reacted with a critical or lytic defervescence. Perisistent crying alone may raise the temperature in infants, especially in those who are fed with comparatively concentrated food to prevent or treat dyspepsia.

The Ear and the Trifacial Nerve.—Uffenorde again draws attention to the diagnostic significance of neuralgia of the trigeminus nerve in apparently cured otitis media. The inflammation sometimes invades the pneumatic cells of the middle ear which may reach as far as the tip of the os petrosum. It seems that the tympanic nerve, which originates in the ganglion petrosum of the glosopharyngeal nerve and constitutes the sensory root of the ganglion oticum (trifacial), is responsible for the neuralgia.

Dealbumination of Urine.—Abelin had excellent results with zinc hydroxide in dealbumination of urine. The method is simple: one drop of phenolphthalein solution is added to 40 cc. of a tenth-normal solution of sodium hydroxide, and a 10 per cent solution of zinc sulphate is added drop by drop until the red color disappears. After adding water to bring

the mixture up to 50 cc., 50 cc. of the urine is added, and the mixture is kept for five minutes in a boiling water bath. The filtrate is free from proteins.

Strahlentherapie, Berlin

24: 1-192, 1926

*Biologic Effect of Roentgen Rays. Y. Nakashima.—p. 1.
*Roentgen Irradiation and Infection. L. Heidenhain.—p. 37.
Roentgenotherapy of Infectious Diseases in Gynecology. G. A. Wagner. —p. 52.
*Roentgenotherapy of Infectious Diseases. F. Pordes.—p. 73.
Roentgenotherapy of Infectious Surgical Processes. S. R. Fraenkel and L. M. Nissnjewitsch.—p. 87.
Irradiation of the Ovaries and Offspring. H. Martius.—p. 101.
Idem. L. Nürnberger.—p. 125.
Irradiation or Operation of Cancer of the Uterus? H. Eymer.—p. 149.
Radiochemical Treatment of Inoperable Malignant Tumors. R. Werner. —p. 153.
Protection Against Rays. T. Neeff.—p. 161.
Distribution of Intensity of Roentgen Rays. E. Lorenz and B. Rajewsky.—p. 175.

Biologic Effect of Roentgen Rays.—In dark field examinations of aqueous solutions of globulin that had absorbed roentgen-ray energy, Nakashima observed very small particles, which were in rapid brownian movement. These particles increased slowly in size, and finally the brownian movement ceased. A certain time passed between the irradiation and the first appearance of the particles. This latent period was followed by a progressive increase in the number of particles. After the increase had reached a certain height, regression set in, caused by precipitation. This was abruptly followed by a second peak. Macroscopically, the irradiated globulin solutions presented turbidity, which could be produced by the administration of very slight doses of energy. Heating the solutions produced the same phenomenon. The author considers this denaturation of the protein molecules as the fundamental process in the biologic effect of the roentgen rays. A certain rôle may also be played by photochemical processes.

Roentgen Irradiation and Infection.—Heidenhain reviews 855 cases of different infections treated with roentgenotherapy. Of thirty-four cases of severe furuncle of the face, thirty-three were cured. Lymphangitis, with and without swelling of the lymph glands, usually disappeared within from twenty-four to forty-eight hours. The results were favorable in peritonitis, if the pus was removed and the irradiation was begun immediately after the operation. Early treatment of phlegmonous angina had an especially good effect on the general condition of the patient. Adnexal infections of the female generative organs showed rapid improvement. Of thirty irradiated erysipelas cases, twenty-two responded to the treatment. A large field was usually irradiated with minimal doses for from two to three minutes, and a 5 mm. aluminum filter was used.

Roentgenotherapy in Infectious Diseases.—Pordes' irradiations of infectious exudates in vitro show that there is a selective destruction of leukocytes. Infections of the peridental membranes seemed to respond better to roentgen-ray irradiation than did other infections. He irradiated small fields with about two Holzknecht units, and employed a 3 mm. aluminum filter. The more acute the infection, the better are the prospects of cure by irradiation. He gives a preliminary report of six favorably treated cases of eye infections: sympathetic ophthalmia, iritis and blepharitis.

Wiener klinische Wochenschrift, Vienna

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*Experiments with Cholagogues. K. Steinmetzer.—p. 1455. C'cn.
Causes of Chronic Constipation. H. Steindl.—p. 1457.
Backache and Hypogastric Pains in Gynecology. H. Zacherl. Supplement.—pp. 1-16.

Puncture of Thalamus Region.—Mehes and Molitor injured the medial part of the left thalamus and hypothalamus in rabbits and dogs with the thermocautery. In these animals, injections of a pituitary extract did not inhibit diuresis and caffeine did not increase the secretion of urine. This tends to confirm Molitor and Pick's theory of a central action of the pituitary extracts and purine derivatives on diuresis.

Experiments with Cholagogues.—Steinmetzer followed Stransky in introducing into the duodenum the bile obtained by a fistula, but prefers to use dogs instead of rabbits in the study of bile secretion. He found that Carlsbad salt increased the secretion of bile in dogs twenty times; salicylates, ten times; an infusion of peppermint, chloral hydrate, cinchophen and camphor followed (the latter increasing the secretion four times). Resin of podophyllum, olive oil, sodium chloride and water influenced the secretion little or not at all; phenobarbital inhibited the bile flow slightly, the methylpropylcarbinol-urethane strongly. Chloral hydrate increased the flow of bile seven times, and lowered its concentration about three times.

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Injections of Hypertonic Dextrose Solutions in Chronic Infections, Especially Tuberculosis.—Bodmer found that intravenous injections of dextrose solutions produced an increase of the capillary pressure, dilatation of the blood vessels and active stimulation of cell function. There was an increase in the metabolism caused by hyperglycemia and augmented formation of glycogen in the cells. A combination of small doses of insulin and injections of dextrose effected a rapid improvement in cases in which there was loss of appetite. Good results were obtained in functional heart disturbances, in weakness of the heart muscle following tuberculosis, and in acute and chronic infectious, exudative conditions. The injections have an especially favorable effect in certain types of pulmonary tuberculosis characterized by hypoglycemia which is independent of the food eaten. Preliminary injections of dextrose promote absorption by the organism of administered remedial agents.

Prognosis and Therapy of Pneumothorax Empyema.—Fraenkel reports two cases in patients aged 24 and 18, respectively. The empyema disappeared in the first case after two years, when the lung dilated spontaneously. Several aspirations, irrigations and irradiations with ultraviolet rays were without effect. In the second case, mixed infection set in, probably caused by irrigation or by the fistula. A plastic operation was performed and the patient died. Pneumothorax empyema usually heals by total resorption, or at least resorption of a large amount of the fluid. Active treatment seems not to be necessary in every case. Punctures are valuable only under certain conditions. The value of irrigations is doubtful. A plastic operation must be performed when a permanent pneumothorax has developed, or when restoration of the lung function is either impossible or not desirable. When a thoracic fistula has developed and mixed infection sets in, spontaneous healing can be expected only under very favorable conditions, and plastic operations must be avoided.

Influenza and Pulmonary Tuberculosis.—Lindhagen's statistics show that the smaller influenza epidemic in 1914-1915 and the more serious one in 1918-1919 in Stockholm and throughout Sweden were followed by a decided increase in the mortality from pulmonary tuberculosis. This was probably due to the deleterious influence of influenza on the tuberculous processes. The same is true of acute pulmonary infection.